THE BIRDS of OHIO

The Birds of Ohio

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LOOKING AT THE BIRDS.

THE BIRDS OF OHIO

A COMPLETE, SCIENTIFIC AND
POPULAR DESCRIPTION OF THE 320 SPECIES OF BIRDS
FOUND IN THE STATE

BY

WILLIAM LEON DAWSON, A.M., B.D.

WITH INTRODUCTION AND ANALYTICAL KEYS BY

LYNDS JONES, M. Sc.

INSTRUCTOR IN ZOOLOGY IN OBERLIN COLLEGE.

ILLUSTRATED BY 80 PLATES IN COLOR-PHOTOGRAPHY, AND MORE THAN 200
ORIGINAL HALF-TONES, SHOWING THE FAVORITE HAUNTS OF THE
BIRDS, FLOCKING, FEEDING, NESTING, ETC., FROM PHOTO-
GRAPHS TAKEN BY THE AUTHOR AND OTHERS.

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To my first-born son,

Will Oberlin

who is already approving himself in a fond father's eyes as

A YOUNG ORNITHOLOGIST

This book is affectionately dedicated.

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INTRODUCTION.

General appreciation of the birds, their beauty, the charm of their songs, their joyous lives, and their usefulness, is one of the most significant signs of the times. It indicates that as a people we are coming into our own. We are living a life beyond the merely commercial. We are looking out upon a larger world lifted to a higher plane. Americans have always excelled in strength and push and general initiative where material things are concerned, but we have been too busy developing ourselves to see about us the beautiful and pleasing in nature. The grand, indeed, has always appealed to us. Now we begin to have leisure for the graceful and the subtle. We are broadening our lives by closer touch with that which appeals to the higher instincts which have been allowed to remain dormant. It is natural and fitting that birds should appeal most strongly to an American, because they possess that vigor and tireless energy which he recognizes in himself. The birds live at white heat and are never idle. They typify American energy.

The study of birds necessarily takes one out of doors. Our medical advisers are always prescribing more outdoor exercise; but without any other object than getting into the fresh air exercise is pretty stupid. Give one the zest of finding new things which must be searched for, something which requires going after, and the necessity for exercise is forgotten in the interest aroused by the ever receding bird. Enlist a child in bird study and the problem of most serious importance to the parent, how to properly guard the developing life and keep it away from evil influences, becomes greatly simplified. A boy cannot be very bad, nor stay bad, if he has a genuine interest in birds. They keep his mind occupied and direct his energies into healthful channels. Life never falls to a dead level to him who knows and loves the birds. Old age, as we are wont to regard it, will never touch him, for he will not wish to live in the past, but continue his interest in the present which will always be fresh and filled with new things to learn.

The study of birds does not require any unusual leisure. Many business men whose business demands practically their whole time and attention are ardent lovers of the birds, and find the few moments of bird study each day valuable to them in their hours of business. They are able to plan their few short vacations so they will count for the most. There is no haphazard effort

to get the most rest in the shortest time, requiring more effort to execute the plan than the rest is worth, but the calm assurance that they are certainly to find what they wish for. No one, no matter how busy, need think that for him bird study is impossible, because some birds may be seen from any window. Attention is the only requisite. Most present day bird students began their study during their period of least leisure.

This book is offered as a help in enlisting and developing your interest in our native birds. The author has always loved birds, and has spent many years in Ohio with the birds at all seasons and in many places. By education and training he is fitted to express here that intense love and appreciation which has been characteristic of his study during all of the ten years of our fellowship as bird lovers. The many happy days and weeks of our association in field work have served only to deepen my conviction that there are few persons whose sympathetic appreciation and careful training could better fit them for the task of revealing the birds to those who wish to know them. Study in Ohio for a considerable term of years, supplemented by study of the same and other birds in many places outside of the State has given to the author of this book unusual knowledge and equipment for the task. College and Theological training also count much for accuracy of knowledge and facility of expression.

The State of Presidents is also the State of varied bird life. With Lake Erie at one end and the Ohio River, a main tributary of the great Mississippi, at the other, midway between the extreme east and the middle west, Ohio is favorably situated for varied bird life, and for comparative ease in the study of that life. The once almost continuous forests are rapidly disappearing, and with them some of our birds, but there is a compensation in the appearance of many others which do not live in the forests. We are now passing through a transition period from the original conditions before the advent of the dominant race to the modified conditions which he has made necessary. The rising generation will see more changes in the birds of our state than we have or will see. The birds will not disappear so long as there is the keen interest shown in them which we see dawning to-day. Their friendship and trust are worthy of any effort which we may put forth.

LYNDS JONES.

Oberlin, Ohio.

PREFACE.

If any doubt existed in the mind of the author at the inception of his task, that the people of Ohio would welcome a book on the birds of the state, that doubt has quite vanished before the words of encouragement and approbation which have already come in, not only from nature-students but from prominent educators and men of affairs. The love of out-of-doors is a growing passion in the hearts of our people, and the willingness on the part of all classes to sit at Nature's feet is a most hopeful sign of the times. Nature in all her aspects is richly vocal to her true disciples, but at no time does she speak more clearly and sweetly, and in language which may be "understanded of the people," than in the voices of the birds. It is with a sense of privilege, therefore, that the author has recorded his observations and impressions of bird-life in this state, and has set forth in orderly fashion a brief summary of our knowledge of our feathered friends. To quicken interest in the birds, to facilitate recognition of their features and observation of their habits and to raise for them, if possible, an army of well-wishers—on the theory that all who really know must love them—has been the author's purpose. Of its accomplishment the future must judge.

A fully illustrated book on the birds of a single state is in a measure a new departure, but the perfection of modern methods, especially that of the three-color process, fortunately makes it possible. With four exceptions, the half-tone cuts in this book are from photographs taken in Ohio, chiefly during the season of 1903. While the aim has been to secure in the pictures both the educational and the artistic interest, the latter has of necessity been occasionally sacrificed.

The treatment of each bird includes both a technical description, of plumage, etc., and a popular account of its habits in Ohio. In the limits prescribed it has at no time been possible to accord any bird the dignity of a genuine life-history, and the sketches as written are by no means exhaustive. In the scientific treatment also it was deemed best not to attempt the elaboration of points in structural ornithology, such as may be found in any standard manual, but to utilize the space thus saved for a more careful analysis of plumage, in so far as local material was available. The plumage descriptions and measurements are based almost entirely upon a first-hand study of the Ohio State University collections, and these are nearly complete as

to Ohio species. Where specimens or data were lacking, I have been under obligation to Ridgway's Manual[1], Coues' Key[2], Chapman's Handbook[3], and other treatises.

The scope of this book, it is almost needless to say, is strictly Ohioan. The birds as described are as any one in Ohio might see them. Something may, indeed, be said from time to time as to the bird's behavior in its distant summer or winter home, but our interest centers upon the bird as it appears in this state. The proportionate treatment, therefore, which each one receives, is prescribed by its relative familiarity or importance within our limits. Common birds are not dismissed with a word because they are common, nor rare ones dilated upon at great length because they are rare, but the effort has been rather to give each bird the place which it actually holds in the average scheme of interest.

The order of treatment is substantially the opposite of the one now followed by the American Ornithologists' Union, and is justifiable principally on the ground that it follows a certain order of interest and convenience. Beginning, as it does, with the supposedly highest forms of bird-life, it brings to the fore the most familiar birds, and avoids that rude juxtaposition of the lowest form of one group and the highest of the one above it, which is the confessed weakness of the A. O. U. code.

The summaries under the caption "General Range" are chiefly those furnished by the Second Edition of the A. O. U. Check-list, modified by such more recent information as has come to hand.

While the author's point of view has been that of a bird-lover, some things here recorded may seem inconsistent with the claim of that title. The fact is that none of us are quite consistent in our attitude toward the bird-world. The interests of sport and the interests of science must sometimes come into conflict with those of sentiment; and if one confesses allegiance to all three at once he will inevitably appear to the partisans of either in a bad light. However, a real principal of unity is found when we come to regard the bird's value to society. The question then becomes, not, Is this bird worth more to me in my collection or upon my plate than as a living actor in the drama of life? but, In what capacity can this bird best serve the interests of mankind? There can be no doubt that the answer to the latter question is usually and increasingly, *As a living bird.* We have stuffed specimens enough, nearly; only a limited few of us are fitted to enjoy the pleasures of the chase, and the objects of our passion are about gone anyway; but never while the hearts of men are set on peace, and the minds of men are alert to receive the impression of the Infinite, will there be too many birds to speak to eye and ear, and to minister to the hidden things of the spirit.

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1 A Manual of North American Birds, by Robert Ridgway. Fourth Edition. Philadelphia: J. B. Lippincott Company.

2 Key to North American Birds, by Elliott Coues, A.M., M.D., Ph.D. Fourth Edition. Boston: Estes and Lauriat.

3 Handbook of Birds of Eastern North America, by Frank M. Chapman. Sixth Edition. New York: D. Appleton and Company.

The birds belong to the people, not to a clique or a coterie, but to all the people as heirs and stewards of the good things of God.

As to the manner of treatment I need not speak further, save to say that the recent publication of Jones' catalogue of the Birds of Ohio[1], excuses me from the necessity of making a precise or complete enumeration of the records of any bird's occurrence—altho as matter of interest I have done so in a few cases. The reader is referred also to Mr. Jones' excellent list for a more particular account of the distribution of each species throughout the state, and for information as to food habits, not extensively given in this volume.

To mention all the books which have been of service in the preparation of this one would be to give a catalogue of the author's library, supplemented by those of friends—evidently an uncalled-for task. A few of the principal works, however, require to be mentioned. The published results of Dr. J. M. Wheaton's work[2] have been largely assumed in this book, or used as a basis of comparison and point of departure. Without his painstaking fidelity many state records would have been lost to sight, and we are all under the deepest obligation to him for a wealth of accumulated material well arranged. Dr. Howard Jones generously placed the contents of his monumental work on the Nests and Eggs of Ohio Birds[3] at our disposal, and we only regret that the limits of this volume forbade our drawing more largely upon its treasures. Mr. Oliver Davie's "Nests and Eggs of North American Birds" (Fifth Edition) has been consulted, and its pages furnish several records for Ohio. Besides these, Ohio pamphlets and local lists too numerous to mention have contributed their share to the result.

Of the catalogues and lists published in adjacent states that of Prof. Amos W. Butler on the "Birds of Indiana" has proved most valuable, both because of the similarity which exists between Ohio and her sister on the west, and for the unusually abundant data which Prof. Butler's enthusiastic labors have provided. Others which deserve mention are McIlwraith's "Birds of Ontario"; Ridgway and Forbes' Ornithology of Illinois"; A. J. Cook's "Birds of Michigan" and Warren's "Birds of Pennsylvania."

Of general works the compendious volumes of Baird, Brewer, and Ridgway, entitled "The Birds of North America", have been most frequently consulted. The first two volumes of Robert Ridgway's "Birds of North and Middle America" have been at hand, and these easily surpass all other purely technical works in importance. Chapman's "Handbook of the Birds

1 Ohio State Academy of Science, Special Papers No. 6. The Birds of Ohio, A Revised Catalogue, by Lynds Jones, M. Sc. Oct. 15, 1903, pp 241.

2 As embodied in his "Report on the Birds of Ohio", appearing in Vol. IV of the State Geological Survey, pp 187-628. A limited number of the Author's separates still exist, and may be had of the Wheaton Publishing Company.

3 "Illustrations of the Nests and Eggs of the Birds of Ohio." Published at Circleville in 24 parts: Elephant folio: Hand-colored plates: July,1880-Dec. 1886. Text by Howard E. Jones. Art work by Genevieve E. Jones, Eliza J. Schulze, Mrs. N. H. Jones, and others. A magnificent work, second only to Audubon. Edition limited to 68 hand-colored copies, of which four still remain unsold, and may be had of the Wheaton Publishing Company.

of Eastern North America" is a model of its class, and its lines—all too brief—have proved a fertile source of inspiration. On the more popular side grateful mention may be made of Langille's "Our birds in their Haunts", and Nehrling's "Our Native Birds of Song and Beauty."

To my friend and ornithological brother, Professor Lynds Jones, I am under the deepest obligations for assistance in the prosecution of this work. Altho having a more accurate knowledge of bird-ways than I, he generously consented to set aside certain plans of his own, and has not spared to give me valued counsel and aid of every sort. To the list of signed sketches which bear his name, should be added the article on the Bob-white, whose signature was inadvertently omitted.

I gratefully acknowledge indebtedness to the State University authorities, and especially to Professors Osborn and Hine, for the use of museum material and for many kindnesses beside; to Mr. C. B. Galbreath of the State Library, and to Mrs. Lida Wheaton for the loan of valuable books; to Rev. Leander S. Keyser, D.D., Dr. Joshua Lindahl, Dr. F. W. Langdon, Dr. Howard Jones, Messrs. C. H. Morris, E. J. Arrick, Wm. Hubbell Fisher, and others, for gracious hospitality; to Rev. W. F. Henninger, Professor Wm. S. Mills, Robert J. Sim, R. L. Baird, Walter C. Metz, R. F. Griggs, and others, for signed sketches, pictures, and data; and to a host of correspondents and friends beside, for hearty cooperation which has made this work a pleasant task and one in a measure representative of the whole state.

To my wife is due a large measure of credit for her painstaking and unselfish work upon the manuscript and in proof-reading. Without her aid the work must have been delayed several months.

I cannot conclude without making grateful acknowledgment also of the sustained interest of my friend and coadjutor, Mr. L. H. Bulkley, and of the service of all those who in good conscience have wrought upon this book, to give it a comely appearance, a body better, I fear, than the expression of its animating spirit, but not higher, I venture to believe, than its aim.

W. Leon Dawson.

Columbus, Dec. 15, 1903.

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TOPOGRAPHY OF A BIRD.

Drawn by Lynds Jones.

OUTLINE DRAWING SHOWING POSITION OF PARTS MOST FREQUENTLY REFERRED TO IN TEXT.

ANALYTICAL KEYS

BY

LYNDS JONES, M. Sc.

HOW TO USE THE KEYS.

While these keys are made for the purpose of identifying any bird in the hand, they are not intended to give more than the barest information about the bird. You should at once turn to the description of the bird whose name you have found by means of the keys, and read what may be found there before remaining content. Often an unsatisfactory identification by the keys will give you the clue so that you can turn to the body of the book and there make sure of your bird. The keys, then, are but a means to an end. They are merely for rapid determination, not for any other particular information.

There are three separate keys. First of all, a Key to the Orders; next a Key to the Families under each order; and lastly a Key to the Species under each family. You should always begin with the Key to the Orders to get your bird in the right group. Having found the order to which it belongs turn to the Key to the Families, find the order there by the number which precedes it in the Key to the Orders, and determine to what family it belongs. In like manner turn to the Key to the Species given under each family and there determine the species. The families are numbered in 1, 2, 3, order under each order, but the species are given the number which they bear in the body of the book. While the orders are not serially arranged in the Key to the Orders, they are arranged in 1, 2, 3, order in the Key to the Families. Likewise, while the species are not serially arranged in the Key to the Species they are so arranged in the body of the book.

It is important that you should know how to use the keys unless you are already familiar with most of the birds described in this book. At first sight they may seem confused, but after a little practice in the use of them they will prove very simple. Let us suppose that you now have a bird in hand which you wish to identify. Suppose it is a Green Heron. In the Key to the Orders, "I." calls for a bird with webbed or lobed feet; your bird has neither webs nor lobes, so you must turn to the contrasting character which will be under "II," which so far describes your bird. Next is "A. Legs and Neck long and slender." That is true of your bird. Then the next is "1. Lores (region between the eye and bill bare." Your bird has bare lores, so it must be one of the Herodiones, Order 6. Turn now to Order 6 in the Key to the Families. Here the first is "I. Bill straight and sharp." That is right for your bird. Your bird belongs to Family 1, Ardeidæ. Turn now to the Key to the Species and find Order 6, and Family 1 under it. The first here is also "I. Wing less than 6.00." Your bird's wing measures more than 6 inches, so try "II. Wing about 7.25." You find that it is nearer that length than the others given, so conclude that your bird is a Green Heron, number 213 in the book. Turn to that number and prove it by the minute description given there. Any other case would work out on the same principle.

KEY TO THE ORDERS.

I. Feet with webs or lobes.
- A. Feet with webs.
  - 1. Webs extending to the base of the toe-nails.
    - a. Legs far back near the tail; tail short or wanting. **16.** PYGOPODES.
    - b. Legs near the middle of the body; tail well developed.
      - (1). Hind toe connected to the front one by a web. **14.** STEGANOPODES.
      - (2). Hind toe, when present, free and opposed to the front ones.
        - (a). Nostrils opening through tubes. **15.** TUBINARES.
        - (b). Nostrils not opening through tubes.
          - (a^1). Bill with tooth-like projections along its sides.
            - (a^2). End half of bill bent abruptly down; legs and neck very long and slender. (*Not found in Ohio.*) ODONTOGLOSSÆ.
            - (b^2). Only tip of bill bent down; legs not very long. **13.** ANSERES.
          - (b^1). Bill without tooth-like projections; wings long. **12.** LONGIPENNES.
  - 2. Webs not extending to the base of the toe-nails. **11.** LIMICOLÆ.
- B. Feet with lobes on the sides of the toes.
  - 1. Legs far back; tail wanting. (*Grebes*). **16.** PYGOPODES.
  - 2. Legs near the middle of the body; tail well developed.
    - a. Forehead with a bare shield. (*Coot*, white) (*Gallinule*, red). **9.** PALUDICOLÆ.
    - b. Forehead without a bare shield; bill long and slender. **11.** LIMICOLÆ.

II. Feet with neither webs nor lobes.
- A. Legs and neck long and slender.
  - 1. Lores bare. **10.** HERODIONES.
  - 2. Lores not bare.
    - a. Toes four. (*Cranes.*) **9.** PALUDICOLÆ.
    - b. Toes three. (*Plovers, etc.*) **11.** LIMICOLÆ.
- B. Legs and neck not decidedly long and slender.
  - 1. Feet very large, toes long and slender; wings moderate. **9.** PALUDICOLÆ.
  - 2. Feet and toes moderate.
    - a. Lower part of tibia bare. **11.** LIMICOLÆ.
    - b. Lower part of tibia feathered.
      - (1). Hind toe short, elevated above the front ones. **8.** GALLINÆ.
      - (2). Hind toe, when present, on the same level as the front toes.
        - (a). Nostrils opening beneath a soft, fleshy membrane. **7.** COLUMBÆ.
        - (b). Bill without a soft, fleshy membrane.
          - (a^1). Bill with a tough cere at its base.
            - (a^2). 3 toes in front, one behind. **6.** RAPTORES.
            - (b^2) 2 toes in front, 2 behind. **5.** PSITTACI.
          - (b^1). Bill without a cere.
            - (a^2). 2 toes in front and 2 behind, or 2 in front and 1 behind.
              - (a^3) Tail feathers stiff and pointed. **3.** PICI.
              - (b^3). Tail feathers not stiff. **4.** COCCYGES.
            - (b^2). 3 toes in front, one behind.
              - (a^3). Middle and outer toes joined for half their length. **4.** COCCYGES.
              - (b^3). Middle and outer toes not joined.
                - (a^4). Feet and bill very small and weak, mouth large. **2.** MACROCHIRES.
                - (b^4). Bill long and very slender. (*Hummingbirds*). **2.** MACROCHIRES.
                - (c^4). Characters various, but not combined as above. **1.** PASSERES.

KEY TO THE FAMILIES.

Order 1. PASSERES. Perching Birds.

About three-fourths of all our Ohio birds belong to this order. In size they range from the Crow and Raven to the Kinglets, which are scarcely more than four inches long. They combine most of the habits met in the other orders and introduce some new ones. All colors of the spectrum are theirs. In song they excel all other birds, but some members of the Oscines, even, have no song. It is impossible to characterize the group, yet it is a group the members of which are readily distinguished from all others. One soon instinctively recognizes any passerine bird on first acquaintance.

I. Back of tarsus rounded like the front.	
A. Bill flattened, hooked at tip.	17. Tyrannidae. Flycatchers.
B. Bill rounded, not hooked.	6. Alaudidae. Larks.
II. Back of tarsus sharp.	
A. Bill hooked at the tip.	
1. Large, over 8.50 inches long.	15. Laniidae. Shrikes.
2. Small, under 6.50 inches long.	16. Vireonidae. Vireos.
3. With a distinct crest; tail tipped with yellow.	14. Ampelidae. Waxwings.
B. Bill not hooked at tip.	
1. With only 9 primaries.	
a. Bill very short, wings long and pointed.	13. Hirundinidae. Swallows.
b. Wings moderate, bill moderate.	
(1). Bill straight, cone-shaped.	
(a). Bill not notched, its base parting the feathers of the forehead.	2. Icteridae. Blackbirds, Orioles, etc.
(b). Bill notched, not parting feathers of forehead.	
(a^1). Nostrils concealed by feathers.	3. Fringillidae. Sparrows, etc.
(b^1). Nostrils exposed.	4. Tanagridae. Tanagers.
(2). Bill slender, not cone-shaped.	
(a). Hind claw long and straightened.	7. Motacillidae. Pipits.
(b). Hind claw not lengthened.	5. Mniotiltidae. Wood Warblers.
2. With 10 primaries.	
a. Upper part of tarsus not divided into scales.	
(1). Wing more than 3.50.	8. Turdidae. Thrushes, etc.
(2). Wing less than 2.50.	9. Sylviidae. Kinglets, Gnatcatcher.
b. Whole tarsus divided into scales.	
(1). Tail feathers stiff, pointed at tip.	11. Certhiidae. Creepers.
(2). Tail feathers normal.	
(a). Nostrils covered by stiff bristly feathers.	1. Corvidae. Crows, Jays.
(b). Nostrils without bristly tufts.	
(a^1). First primary about half as long as the longest one.	12. Troglodytidae. Wrens, Thrashers, etc.
(b^1). First primary about a third as long as the longest one.	10. Paridae. Titmice, Nuthatches.

Order 2. MACROCHIRES. Goatsuckers, Swifts, Hummingbirds.

At a glance this is also a diverse group, but the Swifts, Nighthawks and Whippoorwills are much alike in external appearances and in food habits. They have long and pointed wings, weak feet and bill, and a large mouth. The Hummingbirds differ in having a long and extremely slender bill and small mouth.

I. Wing over 6.50.	3. Caprimulgidae. Whippoorwill, Nighthawk.
II. Wing about 5.00.	2. Micropodidae. Swifts.
III. Wing under 2.00.	1. Trochilidae. Hummingbirds.

Order 3. PICI. Woodpeckers.

The Woodpeckers all belong to one family, Picidae. Their chisel-like bills and stiff, pointed tail feathers, and their habit of clinging in an upright position to tree trunks are characteristic. They feed upon insects, ripe fruit and the sap of trees, and sometimes acorns and nuts.

Order 4. COCCYGES. Cuckoos, Kingfisher.

The two suborders comprising this group have few external characters in common. The Cuckoos eat caterpillars and other insects, the Kingfisher eats fish and probably other aquatic animals. The Cuckoos are woods birds, the Kingfisher is found in the vicinity of water. The Cuckoos are soberly colored, the Kingfisher is distinctly bluish and crested.

I. Toes 2 in front and 2 behind. — 2. CUCULIDAE. CUCKOOS.
II. 3 toes in front and one behind. — 1. ALCEDINIDAE. KINGFISHERS.

ORDER 5. PSITTACI. Parrots.

The Carolina Paroquet has been extinct in the state for more than twenty years.

161. Carolina Paroquet.

ORDER 6. RAPTORES. Vultures, Hawks, Eagles, Owls, etc.

To this order belong the birds which eat flesh. Their feet and bills are adapted for catching and holding the prey, and tearing it into morsels. The vultures have bare heads because they feed upon carrion. The whole group is of so great importance as a balancer of the forces of nature in the animal realm that about half of them are night prowlers; thus, both the diurnal and the nocturnal disturbers of fields and gardens are held in check by the flesh-eaters. Only four of the species which are found in Ohio are harmful to poultry interests.

I. Eyes looking straight forward, set in a striking disk of feathers.
- A. Feathers on back of tarsus growing up. — 1. STRIGIDAE. BARN OWL.
- B. Feathers on back of tarsus growing down. — 2. BUBONIDAE. HORNED AND HOOT OWLS.

II. Eyes not looking forward, no facial disk.
- A. Head bare. — 4. CATHARTIDAE. VULTURES.
- B. Head feathered. — 3. FALCONIDAE. HAWKS, EAGLES, FALCONS, ETC.

ORDER 7. COLUMBÆ. Doves and Pigeons.

To this order belongs the single family COLUMBAE. The Mourning Dove is the only representative of the order now regularly found in the state.

ORDER 8. GALLINÆ. Turkeys, Grouse, Bob-white.

The best representatives of this group are the barn-yard fowls and domestic turkey. They are heavy bodied, short winged birds, which are able to get up from the ground suddenly and fly short distances with great velocity. Their food consists of both vegetable and animal matter in about the proportions of the domestic members of the group.

I. Size very large—about 4 feet long. — 1. MELEAGRINAE. TURKEYS.
II. Size smaller—less than 2 feet long. — 2. TETRAONIDAE. GROUSE, BOB-WHITE.

ORDER 9. PALUDICOLÆ. Cranes, Rails, Coots, Gallinules.

To this diverse group belong the smaller swamp-haunting birds. Only the cranes can be called true waders, living in the more open water, or even in fields away from water; the others are rather sedge haunters, running over the swamp vegetation rather than wading. They feed largely upon swamp animal life.

I. Tarsus over six inches. — 2. GRUIDAE. CRANES.
II. Tarsus under 3.00 inches. — 1. RALLIDAE. RAILS, COOTS, GALLINULE.

ORDER 10. HERODIONES. Herons, Egrets, Bitterns, etc.

The members of this group are preeminently waders, their long legs and long neck enabling them to fish standing in the water. They eat almost any animals which may be found in the swamps and shallow water. They are awkward-appearing birds, but fly well, usually stretching the long legs straight out behind like a rudder when flying.

I. Bill straight and sharp. — 1. ARDEIDAE. BITTERNS, HERONS, EGRETS.

II. Bill curved downward, blunt.
- A. Wing over 16.00 inches. — 2. CICONIIDAE. WOOD IBIS.
- B. Wing under 13.00 inches. — 3. IBIDIDAE. IBISES.

ORDER 11. LIMICOLÆ. Shore Birds.

While the birds comprising this group have been called waders they are not so much so as the Herodiones. Many species live more on the uplands than in or near the water, but some are true waders in shallow water. Some probe in the soft mud, some glean from the surface of the ground, some glean at the water's edge, some search under stones and drift for their food. While none can be called singers in the proper sense, yet some have calls which are certainly more musical than the cries of the Crow or Grackles, which belong to the Oscines. All are nimble of foot and wing. Many flock while migrating, the whole flock moving and turning as one bird.

I. Sides of the toes with lobate webs. — 5. PHALAROPODIDAE. PHALAROPES.

II. Sides of toes without lobes.
- A. Tarsus over 3.50. — 4. RECURVIROSTRIDAE. STILTS, AVOCETS.
- B. Tarsus under 3.50.
  - 1. Colors patchy black, white, rufous. — 2. APHRIZIDAE. TURNSTONES.
  - 2. Colors not patchy.
    - a. Toes 3 (except Black-bellied Plover). — 1. CHARADRIIDAE. PLOVERS.
    - b. Toes 4 (except Sanderling). — 3. SCOLOPACIDAE. SNIPES, SANDPIPERS.

ORDER 12. LONGIPENNES. Gulls, Terns, Jaegers.

Members of this order agree in having a well developed tail, long and pointed wings and therefore great powers of flight. They live over the water instead of in it, gleaning from the surface or diving into it for their food. Their great powers of flight enable them to visit any of the bodies of water inland, where they may be found at some time of year.

I. Middle tail feathers longest. — 1. STERCORARIIDAE. JAEGERS.

II. Tail square. — 2. LARINAE. GULLS.

III. Outer tail feathers longest. — 3. STERNINAE. TERNS.

ORDER 13. ANSERES. Ducks, Geese, Swans.

The members of this group are too well known in general to be carefully treated here. They are all excellent swimmers, and all agree in having tooth-like projections or serrations on the sides of the bill to act as strainers for the mud and water taken into the mouth with the food. They walk fairly well, and all fly well, some with almost incredible swiftness. They are 'Game' birds, and suffer much at the hands of sportsmen. None but geese are ever harmful, and they but seldom.

I. Bill long and slender, cylindrical. — 1. MERGINAE. MERGANSERS.

II. Bill flattened, duck-like.
- A. Lores bare. — 5. CYGNINAE. SWANS.
- B. Lores not bare.
  - 1. Scales on front of tarsus rounded. — 4. ANSERINAE. GEESE.
  - 2. Scales on front of tarsus square.
    - a. Hind toe with a flap or lobe. — 3. FULIGULINAE. SEA AND BAY DUCKS.
    - b. Hind toe without a flap or lobe. — 2. ANATINAE. RIVER AND POND DUCKS.

ORDER 14. STEGANOPODES. Pelicans, Cormorants, etc.

Any member of this order may be known at once by the foot, which has all four toes connected together by three webs. They are strong fliers, and all have a larger or smaller gular sac at the base of the bill. In the pelicans this sac is enormous and is used as a dip-net or scoop for catching small fry in the water.

I. Lores feathered. — 1. FREGATIDAE. MAN-O'-WAR BIRDS.

II. Lores bare.
- A. An enormous pouch below the long bill. — 2. PELECANIDAE. PELICANS.
- B. With a small pouch and moderate bill. — 3. PHALACROCORACIDAE. CORMORANTS.

ORDER 15. TUBINARES. Albatrosses, Shearwaters, Petrels.

One member of this order has accidentally reached the state. The order must be considered as belonging to the oceans, some members of which may sometimes be blown inland by severe storms.

313. Black-capped Petrel.

ORDER 16. PYGOPODES. Diving Birds.

Members of this order occurring in Ohio are duck-like birds, with the legs situated far back on the body, making an upright posture on land necessary. They walk with great difficulty, using the bill and wings to aid them in hobbling or shuffling along. The wings and tail are short, scarcely reaching the posterior end of the body when folded. The Grebes have no tail. All members of this order are expert divers.

I. With 3 toes. — 3. ALCIDAE. AUKS, MURRES, PUFFINS.

II. With 4 toes.
- A. Toes with lobate webs. — 1. PODICIPIDAE. GREBES.
- B. Toes with webs. — 2. GAVIIDAE. LOONS.

KEY TO THE SPECIES.

Order 1. PASSERES. Perching Birds.

Family 1. Corvidae. **Crows, Jays, Ravens.**

The members of this group are too well known to call for comment.

I. Entirely black.
- A. Wing about 15.00. — **1. Northern Raven.**
- B. Wing about 13.00. — **2. American Crow.**

II. With much blue in the plumage, crested. — **3. Blue Jay.**

Family 2. Icteridae. **Blackbirds, Orioles, etc.**

Certain members of this group are among the most familiar of our birds. Our shade trees are filled with Grackles and Orioles all summer long, and there is no pasture or meadow without its Meadowlarks.

The Blackbirds, Bobolinks, and Grackles flock together in spring and fall, but the Orioles and Meadowlarks are seldom seen in large numbers together.

I. Entire under parts black, with or without metallic reflections.
- A. Tail distinctly rounded. — **13. Bronzed Grackle.**
- B. Tail square or only slightly rounded.
  - 1. Entire plumage bluish-black. — **12. Rusty Blackbird.**
  - 2. A red and buff shoulder-patch. — **7 & 8. Red=winged Blackbird and Thick=billed Redwing.**
  - 3. Head, neck and throat seal-brown. — **5. Cowbird.**
  - 4. Nape buffy, back with much white. — **4. Bobolink.**

II. Under parts black and white, or black with buffy tips to feathers.
- A. Under parts streaked black and white. — **7. Red=winged Blackbird.**
- B. Under parts black, nape buffy, back with white. — **4. Bobolink.**
- C. Whole body tipped with rusty. — **12. Rusty Blackbird.**

III. Under parts slate-color, chestnut or buffy.
- A. Under parts slate-color.
  - 1. Wing over 4.25. — **12. Rusty Blackbird.**
  - 2. Wing less than 4.00. — **5. Cowbird.**
- B. Under parts buffy or chestnut.
  - 1. Under parts chestnut. — **10. Orchard Oriole.**
  - 2. Under parts buffy. — **4. Bobolink.**

IV. Under parts with yellow or orange.
- A. Throat black.
  - 1. Back black. — **11. Baltimore Oriole.**
  - 2. Back greenish. — **10. Orchard Oriole.**
- B. Breast with a black crescent. — **9. Meadowlark.**
- C. Head, neck, throat and breast yellow or orange. — **6. Yellow=headed Blackbird.**
- D. Under parts entirely yellow or orange.
  - 1. Rump and tail orange. — **10. Orchard Oriole.**
  - 2. Upper parts greenish. — **11. Baltimore Oriole.**
  - 3. Upper parts brownish, streaked. — **4. Bobolink.**

Family 3. Fringillidae. **Sparrows, Finches, Buntings, etc.**

This is the largest and most varied family of North American Birds. In it are found some of the plainest as well as some of the most brilliantly colored of our birds. Here are grouped those with sweet and varied songs as well as those whose voices can scarcely be distinguished from the shrilling of insects. Some are lowly in habits, nesting on the ground or even scooping out a hollow in which to nest, while some lash their cradles to the topmost twigs of tall trees. All members of the family eat seeds or grains, but all of them also eat some insects. In early spring many species eat the tender buds of trees. Several species eat more insects than vegetable matter. None (except the English Sparrow) seem to be injurious, while all do great service to agriculture in destroying vast quantities of weed seeds.

I. With conspicuous red in the plumage.
- A. Mandibles crossed.
  - 1. With conspicuous white wing-bars. — **19. White=winged Crossbill.**
  - 2. Without white wing-bars. — **18. American Crossbill.**

B. Mandibles not crossed.	
1. Head crested.	**44. Cardinal.**
2. Head not crested.	
a. No red on upper parts.	**45. Rose-breasted Grosbeak.**
b. Upper parts with red.	
(1). With white wing-bars.	
(a). Wing more than 4.00.	**15. Pine Grosbeak.**
(b). Wing less than 3.00.	**20. Redpoll.**
(2). Without white wing-bars.	
(a). Head blue.	(*Hypothetical*) **Painted Bunting.**
(b). Head red.	**16. Purple Finch.**
II. Under parts without streaks.	
A. With distinct yellow in the plumage.	
1. Mandibles crossed.	
a. With white wing-bars.	**19. White-winged Crossbill.**
b. Without white wing-bars.	**18. American Crossbill.**
2. Mandibles not crossed.	
a. Body bright yellow, wings, tail, crown black.	**21. American Goldfinch.**
b. Lores yellow, a white throat blotch.	**33. White-throated Sparrow.**
c. Lores and bend of wing yellow.	**27. Grasshopper Sparrow.**
d. Black throat-patch, yellow above and below it.	**47. Dickcissel.**
e. A broad white wing-patch, bill enormous.	**14. Evening Grosbeak.**
B. With distinct blue in the plumage.	
1. Wing over 3.25.	(*Hypothetical*) **Blue Grosbeak.**
2. Wing under 3.00.	
a. Under parts red.	(*Hypothetical*) **Painted Bunting.**
b. Under parts blue.	**46. Indigo Bunting.**
C. Head and neck black.	
1. Sides with rufous.	**43. Towhee.**
2. Sides without rufous.	**37. Junco.**
D. Crown plain rufous.	
1. A dusky spot in middle of br ast.	**34. Tree Sparrow.**
2. Breast without a dusky spot.	
a. Bend of wing yellow.	**38. Bachman Sparrow.**
b. Bend of wing not yellow.	
(1). Bill reddish.	**36. Field Sparrow.**
(2). Bill dark brown to black.	
(a). Wing less than 3.00.	**35. Chipping Sparrow.**
(b). Bill more than 3.00.	**43. Towhee.**
E. Head more or less streaked.	
1. 3 white, 4 black streaks on crown.	**32. White-crowned Sparrow.**
2. Three gray, 4 brown streaks on crown.	**32. White-crowned Sparrow.**
3. Ear-coverts rufous, a black spot on breast.	**30. Lark Sparrow.**
4. Bend of wing yellow.	**29. Nelson Sparrow.**
F. Crown unstreaked, not plain rufous.	
1. Crown black.	**31. Harris Sparrow.**
2. Plumage mostly white.	**23. Snowflake.**
3. Plumage mostly brown or slate gray.	
a. Forehead black, under parts gray.	**41. Swamp Sparrow.**
b. Throat black.	**17. English Sparrow.**
c. Crown, rump, breast washed with olive yellowish.	**15. Pine Grosbeak.**
4. Plumage brownish with yellowish wash.	**21. American Goldfinch.**
III. Under parts streaked.	
A. Bend of wing yellow.	
1. Center of crown occasionally with an ashy-blue line.	**29. Nelson Sparrow.**
2. Center of crown with a buffy stripe (sometimes whitish).	
a. Under parts heavily streaked.	**26. Savanna Sparrow.**
b. Under parts lightly streaked.	**28. Henslow Sparrow.**
3. Crown plain, or with narrow whitish line.	**38. Bachman Sparrow.**
B. Bend of wing not yellow.	
1. Wing under 3.00.	
a. A cream-buff band across breast.	**40. Lincoln Sparrow.**
b. No cream-buff band across breast.	
(1). Base of tail yellow.	**22. Pine Siskin.**
(2). No yellow on tail.	**39. Song Sparrow.**
2. Wing over 3.00.	

a. Outer tail feathers white. **25. Vesper Sparrow.**
b. Outer tail feathers not white.
(1). Wing over 4.00. **45. Rose-breasted Grosbeak.**
(2). Wing under 4.00.
(a). Tail plain bright reddish-brown. **42. Fox Sparrow.**
(b). Tail grayish-brown.
(a^1). Hind claw straightened and lengthened. **24. Lapland Longspur.**
(b^1). Hind claw normal. **16. Purple Finch.**

Family 4. TANAGRIDAE. **Tanagers.**

These brilliantly colored birds are strictly woods birds, but the Scarlet Tanager is often found in parks and shade trees. They are fair singers, but their bright colors are the most notable characteristic. They eat buds, seeds and insects. The females are yellowish green birds, harmonizing well with the woods-colors and shades.

I. Plumage largely red.
A. Wings and tail black. **48. Scarlet Tanager.**
B. Wings and tail like the body. **49. Summer Tanager.**

II. Without red.
A. Under parts buffy-yellow. **48. Scarlet Tanager.**
B. Under parts greenish. **49. Summer Tanager.**

Family 5. MNIOTILTIDAE. **Wood Warblers.**

One of the reasons why we are so fascinated by this group of little birds may be because it is wholly American! Certainly one reason is because so few of its members are to be found more than a few weeks, at most, during the entire year, in Ohio. They come and go like fairies, now adding color to the May foliage and making merry in the woods, now as silently and mysteriously stealing away as they came. A few species tarry with us all summer long, but they are so small and so unobtrusive that none but the eager student finds them.

They are called Wood Warblers because they live mostly in the woods, or more exactly speaking, most of them live in the woods when at home. In their passage northward and southward they may be found wherever there are trees, gleaning among the foliage for the insect larvæ or eggs, or for the pupa securely rolled in its cocoon amid the autumn foliage. They are great conservators of our forests and orchards. Some glean like Nuthatches or Woodpeckers, some flutter before a leaf or glean from its under surface, some sally forth like true Flycatchers after flying insects.

It is not possible to give distinctive characters for the whole group in few words. All colors are theirs, all patterns of dress, and many sizes of wing and body. For the most part their dress pattern is patchy, but some are streaked all over, while some are nearly uniform in color. In song they vary greatly, from the insect lisp to the full-voiced, whistled song. There is a quality, however, which is distinctly warblerine to the initiated. When you have been ushered into the mysteries of the group of Wood Warblers your delights in bird study begin.

KEY TO THE SPRING MALES.

I. Throat red, orange or chestnut.
A. Throat chestnut. **67. Bay-breasted Warbler.**
B. Throat orange or flame-color. **69. Blackburnian Warbler.**

II. Throat black or dark slate-color.
A. Belly white.
1. Back deep blue, a white spot in wing. **62. Black-throated Blue Warbler.**
2. Back green, cheeks yellow. **71. Black-throated Green Warbler.**
3. Back grayish, a large yellow wing-patch. **54. Golden-winged Warbler.**
4. Back black, whole head black. **88. American Redstart.**
B. Belly yellow.
1. Throat slate-color.
a. No white eye-ring, breast with traces of black. **82. Mourning Warbler.**
b. Eye-ring white, breast without black. **81. Connecticut Warbler.**
2. Throat black, forehead and cheeks yellow. **85. Hooded Warbler.**

III. Throat yellow, white or whitish, under parts without streaks.
A. Large, length over 7.00. **84. Yellow-breasted Chat.**
B. Length less than 6.00.
1. Throat yellow.
a. Whole head, neck and breast bright yellow. **51. Prothonotary Warbler.**
b. Forehead and cheeks black, line over eye yellow. **80. Kentucky Warbler.**
c. A broad, rounded black patch on cheeks. **83. Northern Yellow-throat.**
d. Head and back olive-green. **73. Pine Warbler.**

e. Head bluish-gray, whole under parts bright yellow.	**55. Nashville Warbler.**
f. Forehead yellow, wings bluish.	**53. Blue-winged Warbler.**
g. Head yellow, crown black.	**86. Wilson Warbler.**
h. Head bluish, middle of back with a yellow patch.	
(1). Larger.	**58. Northern Parula Warbler.**
(2). Smaller.	**59. Western Parula Warbler, and** (*Hypothetical*) **Parula Warbler.**
2. Throat white or whitish.	
a. Crown with two black stripes.	**52. Worm-eating Warbler.**
b. Crown bluish-ash, back olive-green.	**57. Tennessee Warbler.**
c. Crown with a partially concealed patch of rufous-brown.	**56. Orange-crowned Warbler.**
d. Front of crown bright yellow, wing bars yellow.	(*Hypothetical*) **Brewster Warbler.** (*But see page* 123.)
IV. Throat white or whitish, under parts streaked or spotted.	
A. Crown, rump, sides of breast yellow.	**63. Myrtle Warbler.**
B. No yellow on crown, rump or breast.	
1. With conspicuous wing-bars.	
a. Back bright bluish.	**65. Cerulean Warbler.**
b. Back grayish, crown black.	**68. Black-poll Warbler.**
c. Back greenish-yellow, sides chestnut.	**66. Chestnut-sided Warbler.**
2. Without wing-bars. Walking Warblers.	
a. Middle of crown with a rufous streak.	**77. Oven-bird.**
b. Crown plain, line over eye buff.	
(1). Smaller.	**78. Water-Thrush.**
(2). Larger.	(*Hypothetical*) **Grinnell Water-Thrush.**
c. Crown plain, line over eye white.	**79. Louisiana Water-Thrush.**
3. Everywhere streaked black and white.	**50. Black and White Warbler.**
V. Throat yellow, under parts streaked or spotted.	
A. Belly white.	**70. Sycamore Warbler.**
B. Belly yellow.	
1. Under parts streaked with rufous-brown.	
a. Crown yellow.	**61. Yellow Warbler.**
b. Crown chestnut.	
(1). Under parts bright yellow.	**75. Yellow Palm Warbler.**
(2). Under parts soiled yellowish.	**74. Palm Warbler.**
2. Under parts streaked or spotted with black.	
a. Back plain grayish, breast with a necklace of black streaks.	**87. Canadian Warbler.**
b. Back streaked with black, crown bluish.	**72. Kirtland Warbler.**
c. Back streaked with black, crown black, ear-coverts rufous.	**60. Cape May Warbler.**
d. Back with a patch of rufous-brown spots.	**76. Prairie Warbler.**
e. Back black, tail with a white band across the middle.	**64. Magnolia Warbler.**

KEY TO THE FALL MALES, AND FEMALES.

I. Under parts yellow or yellowish, unstreaked.	
A. Tail with white spots.	
1. Wings with white bars.	
a. Entire under parts pure yellow.	**65. Magnolia Warbler.**
b. Throat yellow, belly white.	
(1). Larger.	**58. Northern Parula Warbler.**
(2). Smaller.	**59. Western Parula Warbler.**
c. Under parts pale yellowish.	
(1). Back bluish, without streaks.	**65. Cerulean Warbler.**
(2). Back olive-green, without streaks.	**73. Pine Warbler.**
(3). Back olive-green, streaked.	
(a). Under parts pale yellowish-white.	**68. Black-poll Warbler.**
(b). Under parts pale cream-buff.	**67. Bay-breasted Warbler.**
2. Wings without white bars.	
a. A white spot in the wing.	**62. Black-throated Blue Warbler.**
b. No white spot in the wing.	**85. Hooded Warbler.**
B. Tail without white spots.	
1. Entire under parts bright yellow.	
a. Upper parts bright olive-green.	**86. Wilson Warbler.**
b. Upper parts bright greenish-yellow.	**61. Yellow Warbler.**
c. Upper parts ashy-gray-greenish.	**55. Nashville Warbler.**

2. Only throat and breast yellow.
   a. Legs flesh-color. — **83. Northern Yellow-throat.**
   b. Legs blackish. — **55. Nashville Warbler.**
3. Under parts uniform yellowish.
   a. Back ashy-greenish. — **56. Orange-crowned Warbler.**
   b. Back brownish-olive-green. — **55. Nashville Warbler.**
   c. Back greenish-yellow. — **61. Yellow Warbler.**
   d. Back bright olive-green.
      (1). A white spot in the wing. — **62. Black-throated Blue Warbler.**
      (2). Under tail-coverts yellow. — **83. Northern Yellow-throat.**
      (3). Under tail-coverts white. — **57. Tennessee Warbler.**

II. Under parts yellow or yellowish, streaked or spotted.
A. Under parts streaked with rufous brown.
1. Under parts yellowish-white. — **74. Palm Warbler.**
2. Under parts yellow. — **75. Yellow Palm Warbler.**
B. Under parts with black streaks or spots.
1. Only the sides streaked. — **76. Prairie Warbler.**
2. Whole breast more or less streaked.
   a. Cheeks bright yellow. — **76. Black-throated Green Warbler.**
   b. Cheeks gray.
      (1). Rump and line over eye yellowish. — **60. Cape May Warbler.**
      (2). Rump dull gray.
         (a). Head and neck olive-green. — **68. Black-poll Warbler.**
         (b). Head and neck brownish-gray. — **72. Kirtland Warbler.**

III. Under parts white or whitish. streaked or spotted.
A. Back streaked with black.
1. Sides streaked with chestnut. — **67. Bay-breasted Warbler.**
2. Under parts with black streaks.
   a. Crown black. — **50. Black and White Warbler.**
   b. Crown olive-green. — **68. Black-poll Warbler.**
B. Back unstreaked.
1. Cheeks yellowish, back greenish. — **71. Black-throated Green Warbler.**
2. Cheeks and back grayish. — **60. Cape May Warbler.**
3. Back brownish. — **74. Palm Warbler.**
4. Base of tail, sides of breast and band in wing yellow. — **88. American Redstart.**

IV. Under parts white or buffy, unstreaked.
A. Tail with white or yellow spots.
1. Wing-bars white or gray.
   a. Under parts white.
      (1). Back greenish-yellow. — **66. Chestnut-sided Warbler.**
      (2). Back streaked with black and white. — **50. Black and White Warbler.**
      (3). Back brownish, or grayish-green. — **73. Pine Warbler.**
   b. Under parts tinged with buffy. — **67. Bay-breasted Warbler.**
2. Wing-bars yellowish, greenish or absent.
   a. Back gray or grayish. — (*Hypothetical*) **Brewster Warbler.** (*Page* 123.)
   b. Back brownish. — **88. American Redstart.**
   c. Back greenish-yellow.
      (1). Under parts pure white. — **66. Chestnut-sided Warbler.**
      (2). Under parts yellowish. — **61. Yellow Warbler.**
B. Tail without white or yellow spots.
1. A white spot in the wing. — **62. Black-throated Blue Warbler.**
2. No white spot in the wing. — **83. Northern Yellow-throat.**

Family 6. ALAUDIDAE. **Larks.**

These are the true Larks, singing as they soar upward, and wholly terrestrial in habits. They rarely perch upon anything but a flat or flattened surface. They eat both seeds and insects, and are useful to the agriculturist.

I. Eyebrow yellow. — **89. Horned Lark.**
II. Eyebrow not yellow.
A. Larger and lighter. — **90. Hoyt Horned Lark.**
B. Smaller and darker. — **91. Prairie Horned Lark.**

Family 7. MOTACILLIDAE. **Pipits.**

One member of this family is found in Ohio. It resembles the Horned Larks in size and general coloration, and it walks. However, it wags its tail and shows the white outer tail feathers. There is no black patch on the breast, nor any yellow on the throat.

92. American Pipit.

Family 8. TURDIDÆ. **Thrushes, Robin, Bluebird.**

It can hardly be disputed that the Thrushes are the most gifted of our birds in song. There is even reasonable doubt if the famed Nightingale of Europe can approach them in real musical rendition. The songs of the Thrushes are capable of being reproduced by musical instruments, and their phrases reduced to musical notation. The true Thrushes are birds of the woods, the deeper woods, but the Robin and Bluebird have become nearly civilized; and their songs are less musical.

I. Back with evident blue. **99. Bluebird.**

II. Back blackish, underparts largely rufous. **98. American Robin.**

III. Back brown or olive, under parts more or less spotted.
- A. Upper parts olive brown, tail rufous. **97. Hermit Thrush.**
- B. Upper parts cinnamon-brown.
  - 1. Under parts heavily spotted with black. **93. Wood Thrush.**
  - 2. Under parts pale buffy, lightly marked. **94. Wilson Thrush.**
- C. Upper parts olive.
  - 1. Throat, breast, cheeks, deep cream-buff. **96. Olive=backed Thrush.**
  - 2. Throat, breast, cheeks, almost white. **95. Gray=checked Thrush.**

Family 9. SYLVIIDAE. **Old World Warblers.**

Only three representatives of this Old World group are found in Ohio, and only one of these remains to nest. Next to the Hummingbirds they are the smallest of our birds, and are therefore easily overlooked amid the foliage. While so small their voices are strong and carry far; particularly the Ruby-crowned Kinglet.

I. With red or yellow on the crown.
- A. Crown with yellow or orange bordered by black. **100. Golden=crowned Kinglet.**
- B. Crown with a concealed ruby patch. without black. **101. Ruby=crowned Kinglet.**

II. Without red or yellow on crown.
- A. Back ashy blue, tail long. **102. Blue=gray Gnatcatcher.**
- B. Back olive-green. **101. Ruby=crowned Kinglet.**

Family 10. PARIDAE. **Nuthatches, Titmice.**

These are birds of the entire year. Without them in winter our woods would be dreary indeed and well nigh birdless. They are not timid, but on the contrary are more curious than the proverbial woman. They are perfectly at home in any position on any kind of a surface, whether horizontal, inclined or perpendicular, but the Nuthatches prefer to cling head down. They will eat anything in winter, and can readily be drawn to the windowsill with crumbs, nuts or suet. They soon lose any fear of man which they may have had, and perch on the outstretched hand for food.

I. Throat black, crown black.
- A. Tail over 2.30. **107. Chickadee.**
- B. Tail under 2.20. **108. Carolina Chickadee.**

II. Throat not black, crown various.
- A. Head crested. **106. Tufted Titmouse.**
- B. Head not crested.
  - 1. Whole top of head brown. **105. Brown=headed Nuthatch.**
  - 2. Top of head black.
    - a. Wing over 3.25. **103. White=breasted Nuthatch.**
    - b. Wing under 3.00. **104. Red=breasted Nuthatch.**

Family 11. CERTHIIDAE. **Creepers.**

Our Brown Creeper may be at once known by its habit of climbing up a tree trunk or branch spirally. It looks a little like a very small Woodpecker, but the bill is slender and curved, and there are three toes in front and one behind instead of two in front and two behind.

109. Brown Creeper.

Family 12. TROGLODYTIDAE. **Mockers, Thrashers, and Wrens.**

A snap-shot judgment would separate this family into two distinct families, or return the Mockers to the Turdidæ, but more careful comparison and study reveals the logic of the present arrangement. In song and story this group is perhaps better known than any other whole group of birds. Certainly it deserves the distinction, for the Mockingbird alone might well serve to bring the group into prominence. The Wrens are too nearly household birds to escape popular attention, even amid the rabble of English Sparrows. The Wrens, especially, are brimming over with energy, which is fittingly illustrated by the forward pointing tail. They are true Americans.

I. Wing over 3.50.
- A. Slate-color, under tail-coverts rufous. — **111. Catbird.**
- B. Back grayish, outer tail-feathers white. — **110. Mockingbird.**
- C. Back rufous, under parts spotted. — **112. Brown Thrasher.**

II. Wing less than 3.00.
- A. Wings not barred. — **114. Bewick Wren.**
- B. Wings barred.
  - 1. Back streaked with white.
    - a. White streaks confined to center of back. — **118. Long-billed Marsh Wren.**
    - b. Wings and whole back white streaked. — **117. Short-billed Marsh Wren.**
  - 2. Back not streaked with white.
    - a. A long white streak over the eye. — **113. Carolina Wren.**
    - b. No white line over the eye.
      - (1). Belly, sides, and breast barred. — **116. Winter Wren.**
      - (2). Sides only faintly barred. — **115. House Wren.**

Family 13. HIRUNDINIDAE. **Swallows, Martins.**

The Swallow form and carriage are too well known to call for comment. They are strong, graceful flyers, feeding upon flying insects for the most part, but sometimes gleaning from the grass-tops as they fly over the pastures or meadow. Three or four of the species nest about the habitations of man, one of them, Purple Martin, exclusively. After the breeding season, when the young have become able to fly well, the Swallows gather in large companies preparatory to their southward journey. Telegraph wires along the lake front are then often covered with the birds. None of the Swallows are in any way injurious, but all are useful birds.

I. Upper parts with metallic reflections.
- A. Under parts steel-blue. — **119. Purple Martin.**
- B. Throat chestnut, rufous or brownish.
  - 1. Tail deeply forked. — **121. Barn Swallow.**
  - 2. Upper tail coverts rufous or buffy. — **120. Cliff Swallow.**
- C. Throat gray or white.
  - 1. Entire under parts white. — **122. Tree Swallow.**
  - 2. Throat and breast brownish-gray. — **119. Purple Martin.**

II. Upper parts without metallic reflections.
- A. Throat and breast brownish-gray. — **124. Rough-winged Swallow.**
- B. A brownish band across the white breast. — **123. Bank Swallow.**

Family 14. AMPELIDAE. **Waxwings.**

The Waxwings are beautiful but inconstant birds. They are here at one time and gone the next. Their tufted head and silky-brownish plumage are always good field marks. They have no true song, but chatter faintly. The Cedarbird is fond of ripe cherries, but always prefers ripe mulberries to anything else. Depredations upon the cherry crop may be prevented by the proximity of a mulberry tree.

I. Wing over 4.50. — **125. Bohemian Waxwing.**

II. Wing under 4.00. — **126. Cedar Waxwing.**

Family 15. LANIIDAE. **Shrikes.**

The Shrikes are the birds of prey among the Passeres. Their feet and bill are adapted for a predatory life. Mice, snakes, birds and insects are captured and eaten, or impaled on thorns for future use as the occasion demands.

I. Wing over 4.00. — **127. Northern Shrike.**

II. Wing less than 4.00. — **128. Migrant Shrike.**

Family 16. VIREONIDAE. **Vireos.**

These small birds bear some resemblance to the Shrikes in general structure, but differ widely in habits. They are all woods-hunters, while the Shrikes prefer the open fields. They glean from the surface of leaves or from the bark, and sometimes dart out after a flying insect. Their food is almost wholly insect. They are less brisk of movement than the Warblers, but bear a fairly close resemblance to them in a general way. A novice might easily become confused between the two groups. All of the Vireos are good singers, and the White-eyed is a good mimic. All build pensile nests, sometimes of beautiful pattern and careful workmanship.

I. With distinct wing-bars.
- A. Wing under 2.75. — **134. White-eyed Vireo.**
- B. Wing over 2.75.

1. Throat and breast bright yellow. **132. Yellow-throated Vireo.**
2. Throat and breast white. **133. Blue-headed Vireo.**

II. Without wing-bars.
A. Wing over 3.00. **129. Red-eyed Vireo.**
B. Wing under 3.00.
1. Under parts yellowish. **130. Philadelphia Vireo.**
2. Under parts white. **131. Warbling Vireo.**

Family 17. TYRANNIDAE. **Flycatchers.**

The Flycatchers are so named from their habit of darting out from a perch to catch some flying insect, returning to the same perch for a lookout. The Kingbird sometimes eats quantities of honey-bees, but with this exception the group is a very beneficial one.

I. Tail deeply forked. **135. Scissor-tailed Flycatcher.**

II. Tail not forked.
A. Wing over 3.00.
1. Tail tipped with white. **136. Kingbird.**
2. Tail with rufous on inner vanes of feathers. **137. Crested Flycatcher.**
3. Tail fuscous.
a. Wing 4.00 or more. **139. Olive-sided Flycatcher.**
b. Wing under 3.50.
(1). Bill black. **138. Phoebe.**
(2). Lower mandible pale brownish. **140. Wood Pewee.**
B. Wing under 3.00.
1. Upper parts with an evident brownish tinge.
a. Wing over 2.60. **143. Traill Flycatcher, and** (*hypothetical*) **Alder Flycatcher.**
b. Wing under 2.60. **144. Least Flycatcher.**
2. Upper parts without brown.
a. Under parts sulphur yellow. **141. Yellow-bellied Flycatcher.**
b. Under parts only faintly yellowish. **142. Green-crested Flycatcher.**

ORDER 2. MACROCHIRES. Goatsuckers. Swifts, Hummingbirds.

Family 1. TROCHILIDAE. **Hummingbirds.**

Our Ruby-throated Hummingbird is the smallest of our birds. It is a familiar object about flower gardens, where it may sometimes be mistaken for a large hawk moth; but Hummingbirds seldom feed during twilight, while the moths seldom feed during the day. Hummingbirds eat both nectar and insects. **145. Ruby-throated Hummingbird.**

Family 2. MICROPODIDAE. **Swifts.**

Our Chimney Swift is a familiar object to all. It is in no sense a Swallow. It nests and roosts in chimneys. and is almost never seen sitting still except while incubating or protecting the young. It is a tireless flier, and a very useful bird. **146. Chimney Swift.**

Family 3. CAPRIMULGIDAE. **Whippoorwill, Nighthawk.**

The two species comprising tnis family are the largest birds found in Ohio belonging to this order. Nighthawk is only partially nocturnal, but Whippoorwill is wholly so. Nighthawk frequently nests on the top of flat-roofed city buildings, but Whippoorwill always nests in the woods. They are famous insect destroyers, and are distinctly beneficial in all respects.

I. A white spot in the wing. **149. Nighthawk.**

II. No white spot in the wing. **147. Whippoorwill.**

ORDER 3. PICI. Woodpeckers.

Family. PICIDAE. **Woodpeckers.**

The characters already given for the order are sufficient.

I. Whole top of head red.
A. Throat red.
1. Body colors in bands: red, black, white, black. **155. Red-headed Woodpecker.**
2. Colors not in bands. a black crescent on breast. **153. Yellow-bellied Sapsucker.**
B. Throat white.
1. A black crescent on breast. **153. Yellow-bellied Sapsucker.**
2. Breast and belly black. **154. Northern Pileated Woodpecker.**
3. Under parts reddish, unmarked. **156. Red-bellied Woodpecker.**

II. Red on head confined to a band across nape.
- A. Under parts black, unspotted.
  - 1. Bill blackish. — **154. Northern Pileated Woodpecker.**
  - 2. Bill white. — (*Hypothetical*) **Ivory-billed Woodpecker.**
- B. Under parts spotted or streaked.
  - 1. Rump white; a black crescent on breast. — **157. Northern Flicker.**
  - 2. Head black, red in 2 spots on nape. — **151. Red-cockaded Woodpecker.**
- C. Under parts white or whitish.
  - 1. Crown gray. — **156. Red-bellied Woodpecker.**
  - 2. Crown black.
    - a. Bill over 1.00. — **149. Hairy Woodpecker.**
    - b. Bill under 1.00. — **150. Downy Woodpecker.**

III. Head without red.
- A. Bill white. — (*Hypothetical*) **Ivory-billed Woodpecker.**
- B. Bill not white.
  - 1. Under parts unmarked.
    - a. Bill over 1.00. — **149. Hairy Woodpecker.**
    - b. Bill under 1.00. — **150. Downy Woodpecker.**
  - 2. Under parts spotted or barred or streaked.
    - a. Back wholly black. — **152. Arctic Three-toed Woodpecker.**
    - b. Back black and white.
      - (1). Breast with a black patch. — **153. Yellow-bellied Sapsucker.**
      - (2). Breast without a black patch.
        - (a). Wing over 5.00. — **155. Red-headed Woodpecker.**
        - (b). Wing under 5.00. — **151. Red-cockaded Woodpecker.**

Order 4. COCCYGES. Cuckoos, Kingfisher.

Family 2. Cuculidae. **Cuckoos.**

The Cuckoos are shy birds, making their way among the tree branches and in the foliage without sound or commotion. Their slender bodies and long tail give them the appearance of snake-like proportions and movement. The popular belief that their peculiar calls indicate the approach of a storm is not well founded, as any one may learn by a little careful study of these birds. Their great value to agriculture and especially to the horticulturalist, lies in their habit of eating quantities of the tent caterpillar and other hairy and spiny caterpillars and larvæ which other birds will not touch. They should be encouraged to nest near the orchard.

I. Lower mandible yellow, wings with rufous. — **159. Yellow-billed Cuckoo.**

II. Whole bill black, wings without rufous. — **160. Black-billed Cuckoo.**

Family 1. Alcedinidae. **Kingfishers.**

The single member of this family inhabiting Onio may be found about streams and ponds and lakes looking for fish and tadpoles. He is not particularly useful nor particularly harmful. He is a desirable part of a landscape because he is picturesque and interesting. There is no good reason why he should be harmed. **158. Belted Kingfisher.**

Order 5. PSITTACI. Parrots.

The single species representing this order has long since become extinct in Ohio. **161. Carolina Paroquet.**

Order 6. RAPTORES. Birds of Prey.

Family 1. Strigidae. **Barn Owl.**

The single species comprising this family is sufficiently treated in the discussion of that species in the body of this book. **162. Barn Owl.**

Family 2. Bubonidae. **Horned Owls, Hoot Owls, etc.**

Most owls are nocturnal in habits, but most of them are also able to fly well by day. Some are seldom seen during daylight except in dark weather, or when startled from their retreats, and some prefer the day to hunt in. Their cries are weird and startling. They nest either in hollow trees or in open nests, but seldom if ever make a whole new nest for themselves. Their food varies with the species, but mammals, insects and birds form the greater part of their diet. Only one species, the Great Horned Owl, is distinctly and always injurious. Some are among the most useful of animals and should be carefully protected.

I. With conspicuous ear-tufts.
  A. Wing less than 8.00. — **168. Screech Owl.**
  B. Wing more than 8.00.
    1. A large white throat-patch. — **169. Great Horned Owl.**
    2. No white throat-patch. — **163. American Long-eared Owl.**

II. With very short or no ear-tufts.
  A. Wing more than 10.00.
    1. Plumage largely white. — **170. Snowy Owl.**
    2. Plumage brownish.
      a. Wing more than 15.00. — **166. Great Gray Owl.**
      b. Wing less than 15.00 but more than 10.00.
        (1). Plumage conspicuously barred. — **165. Barred Owl.**
        (2). Plumage not barred. — **164. Short-eared Owl.**
  B. Wing less than 10.00.
    1. Wing less than 6.00. — **167. Saw-whet Owl.**
    2. Wing more than 6.00. — **171. American Hawk Owl.**

Family 3. Falconidæ. **Kites, Hawks, Eagles, Falcons, etc.**

After a most thorough and careful investigation of the food of all of our birds of prey by our national Agricultural Department, Dr. A. K. Fisher shows that but four of the 28 species which have been found in Ohio are more injurious than useful, and but three members of this family, the Sharp-shinned and the Cooper Hawks, and the American Goshawk, are more harmful than beneficial. Hawks eat the mice and insects which injure grain and fruit. We need to discriminate carefully before killing in cold blood. One may be wholly justified in killing when his poultry or other property is being destroyed, whether the kind doing the killing belongs to a species that is harmful or not.

There is no sure mark by which a hawk may be known from all other birds, but their sharp, curved talons and sharply hooked beaks are good indications of what they eat and how they live. In practical study one soon comes to know a member of this group at sight.

I. Wing over 20 inches long.
  A. Tarsus entirely feathered. — **185. Golden Eagle.**
  B. Lower half of tarsus bare. — **186. Bald Eagle.**

II. Wing under 19 inches long.
  A. Under parts streaked or spotted, without bars.
    1. Outer primary conspicuously barred.
      a. Wing under 10.00.
        (1). Back bright reddish-brown, plain or barred. — **174. American Sparrow Hawk.**
        (2). Back fuscous or slaty.
          (a). Wing under 7.00. — **177. Sharp-shinned Hawk.**
          (b). Wing over 7.50.
            (a^1). Tail over 7.00, rounded. — **178. Cooper Hawk.**
            (b^1). Tail under 6.00, square. — **173. Pigeon Hawk.**
      b. Wing over 10.00.
        (1). Rump white. — **176. Marsh Hawk.**
        (2). Rump not white.
          (a). Tail over 10.00. — **179. American Goshawk.**
          (b). Tail under 8.00. — **172. Duck Hawk.**
    2. Outer primary not, or not conspicuously barred.
      a. Wing under 12.00. — **183. Broad-winged Hawk.**
      b. Wing over 12.00, under 14.00. — **182. Red-shouldered Hawk.**
      c. Wing over 15.00. — **180. Red-tailed Hawk.**
  B. Under parts streaked or spotted, with bars.
    1. Front of tarsus with distinct rounded scales. — **172. Duck Hawk.**
    2. Front of tarsus with distinct square scales.
      a. Bluish-slate color above. — **179. American Goshawk.**
      b. Pattern various, but in general brownish above.
        (1). Tail rufous, wholly or mostly. — **180 & 181. Red-tailed Hawk and Western Red-tail.**
        (2). Tail barred with brown and light gray.
          (a). Wing more than 12.00. — **182. Red-shouldered Hawk.**
          (b). Wing less than 12.00. — **183. Broad-winged Hawk.**
    3. Front of tarsus with indistinct scales or smooth.
      a. Upper tail-coverts white. — **176. Marsh Hawk.**
      b. Upper tail-coverts not white.
        (1). Wing over 9.00, tail rounded. — **178. Cooper Hawk.**
        (2). Wing under 9.00, tail square. — **177. Sharp-shinned Hawk.**

4. Tarsus entirely feathered. **184. American Rough-legged Hawk.**

C. Under parts neither barred nor streaked.

1. Under parts not white. **184. American Rough-legged Hawk.**

2. Under parts white.

a. Tail square. **187. American Osprey.**

b. Tail deeply forked. **175. Swallow-tailed Kite.**

Family 4. CATHARTIDAE. **Vultures.**

The two Vultures found in Ohio are scavengers of great service where they are at all numerous. They feed upon all kinds of carrion and offal, even coming into the streets of towns to gather any garbage which may be carelessly left by those who have contempt for modern sanitary conditions in centers of population. In Ohio they are not so bold nor so numerous as to be very important factors in carrion destruction. On the wing they are stately birds, going straight forward as well as ascending with little or no flapping of the wings. They have mastered the art of utilizing currents of air for propulsion.

I. Wing about 22 inches long. **188. Turkey Vulture.**

II. Wing about 17 inches long. **189. Black Vulture.**

ORDER 7. COLUMBÆ. Wild Pigeon, Mourning Dove.

Family. COLUMBAE. **Pigeons and Doves.**

The two members of this group are too well known to call for extended comment here. They are largely grain eaters and weed seed eaters, and are arboreal in contrast to the grouse forms. The small head and pointed tail form unmistakable field marks.

I. Wing about 8 inches long. **190. Passenger Pigeon.**

II. Wing about 6 inches long. **191. Mourning Dove.**

ORDER 8. GALLINÆ. Grouse, Turkeys, Bob-white.

Family 2. TETRAONIDAE. **Grouse, Bob-white.**

It is, perhaps, needless to say that the members of this group are pretty strictly terrestrial. They feed upon grains and nuts, but also eat some insects. They are prime game birds.

I. Length about 10 inches. **196. Bob-white.**

II. Length over 15 inches.

A. Lower half of tarsus bare. **194. Ruffed Grouse.**

B. Whole tarsus feathered. **195. Prairie Hen.**

Family 1. PHASIANIDAE. **Pheasants and Turkeys.**

Of the two species of this group found in Ohio one, the Wild Turkey, is becoming extinct, and the other, the Mongolian Pheasant, is just being introduced. The Wild Turkey is the noblest of the game birds.

I. Middle tail feathers much lengthened. **192. Mongolian Pheasant.**

II. Middle tail feathers not much lengthened. **193. Wild Turkey.**

ORDER 9. PALUDICOLÆ. Cranes, Rails, Coots, Gallinules.

Family 1. RALLIDAE. **Rails, Coot, Gallinules.**

To this group belong the swamp skulkers. The Coot sometimes takes to open water, often seeming to prefer to feed there, but it nests in the swamp vegetation. It is difficult to make the Rails and Gallinules leave their reedy retreats. They are sure of safety among the reeds and sedges and are loth to trust the open air. They glean for food from lily pads and the surface of the water, as well as in the mud and water. They eat insects and tadpoles, and probably some vegetation.

I. Wing over 6 inches.

A. General plumage brown. **197. King Rail.**

B. General plumage purplish-blue. **202. Purple Gallinule.**

C. General plumage slaty-black.

1. Toes with lobes; shield on forehead white. **204. American Coot.**

2. Toes without lobes; shield on forehead red. **203. Florida Gallinule.**

II. Wing under 5.50.

A. Wing under 3.50.

1. Back blackish, *barred* with white. **200. Yellow Rail.**

2. Back blackish, *spotted* with white. **201. Black Rail.**

B. Wing over 3.50.
  1. Bill over 1 inch. **198. Virginia Rail.**
  2. Bill under 1 inch. **199. Sora.**

Family 2. GRUIDAE. **Cranes.**

The Cranes so closely resemble the Herons in general appearance that one is surprised to note that they are really different. In habits they resemble the Herons in many particulars, but are more often found away from water in the uplands. They nest on the ground instead of in trees, as most of the Herons do. They can eat anything.

I. Wing less than 19 inches. **206. Little Brown Crane.**

II. Wing over 21 inches.
  A. Primaries black, rest of plumage white. **205. Whooping Crane.**
  B. Plumage brownish gray. **207. Sandhill Crane.**

ORDER 10. HERODIONES. Bitterns, Herons, etc.

Family 1. ARDEIDAE. **Bitterns, Herons, Egrets.**

All members of this family have long, sharply pointed bills, long legs and neck, and feed standing 'knee' deep in the water. The sharp bill is a formidable weapon of defense as well as offense, while the long neck enables them to dart that weapon out with a lightning stroke. They feed upon frogs and insects, and occasionally fish which find their way into the shallow water.

I. Wing less than 6.00.
  A. Under parts buffy. **209. Least Bittern.**
  B. Under parts rufous-chestnut. (*Hypothetical*) **Cory Least Bittern.**

II. Wing about 7.25. **214. Green Heron.**

III. Wing 9 to 11 inches.
  A. General plumage tawny or umber-brown, everywhere streaked with darker. **208. American Bittern.**
  B. General plumage slaty-blue. **213. Little Blue Heron.**
  C. General plumage white.
    1. Tips of primaries blue. **213. Little Blue Heron** (*im.*)
    2. Tips of primaries not blue. **212. Snowy Heron.**

IV. Wing over 11 inches.
  A. Wing about 12 inches.
    1. Crown black, not streaked. **215. Black-crowned Night Heron.**
    2. Crown streaked. **215. Black-crowned Night Heron.** (*im.*)
  B. Wing over 13 inches.
    1. Pure white. **211. American Egret.**
    2. Upper parts bluish. **210. Great Blue Heron.**

Family 2. CICONIIDAE. **Wood Ibis.**

The Wood Ibis, the only member of this group found in Ohio, is of more southern distribution, but sometimes wanders to the state. It resembles the Herons in habits.

216. Wood Ibis.

Family 3. IBIDIDAE. **Ibises.**

The Glossy Ibis is accidental in Ohio, its home being well south. In its wanderings it rarely enters regions of our latitude.

217. Glossy Ibis.

ORDER 11. LIMICOLÆ. Snipes, Sandpipers, Plovers, etc.

Family 1. CHARADRIIDAE. **Plovers.**

The Plovers are short-billed shore birds, and therefore get their food by gleaning from the surface of the ground on the uplands or along shore. They have whistled calls which are somewhat musical.

I. Toes 4. **218. Black-bellied Plover.**

II. Toes 3.
  A. Back streaked or spotted. **219. American Golden Plover.**
  B. Back neither streaked nor spotted.
    1. Rump rufous. **220. Killdeer.**
    2. Rump not rufous.

a. Toes webbed at the base. **221. Semipalmated Plover.**
b. Toes not webbed at the base.
(1). A continuous black breast band. **223. Belted Piping Plover.**
(2). Black band interrupted on center of breast. **222. Piping Plover.**

Family 2. APHRIZIDAE. **Turnstone.**

The single species found in Ohio is found along the shore of Lake Erie during the migrations. There it is found gleaning like the Killdeer at the water's edge or among the higher drift.

224. Turnstone.

Family 3. SCOLOPACIDAE. **Snipes, Sandpipers, Curlews, etc.**

The birds comprising this group are for the most part inhabiters of wet places, probing in the soft mud for worms and insects. Some species can move the tip of the bill independently of the rest of the bill, and so are enabled to grasp the morsel of food under ground, or form a hook to draw it out. Some are found on the uplands gleaning from the surface much like the Plovers. During the nesting season many have what might be called songs if these birds belonged to the singers. Many also have whistled calls during the migrations. All nest on the ground.

I. Bill over 2 inches long.
A. Bill over 5 inches long. **249. Long-billed Curlew.**
B. Bill under 4.50.
1. Bill curved downward.
a. Bill about 3.75. **250. Hudsonian Curlew.**
b. Bill about 2.40. **251. Eskimo Curlew.**
2. Bill straight or curved upward.
a. Bill over 3.00.
(1). Upper tail-coverts white. **240. Hudsonian Godwit.**
(2). Upper tail-coverts not white. **239. Marbled Godwit.**
b. Bill under 3.00.
(1). Bill widened and pitted at the tip.
(a). Wing about 5.75. **227. Dowitcher.**
(b). Wing about 6.00. **228. Long-billed Dowitcher.**
(2). Bill not widened at the tip.
(a). Wing over 7.50.
(a^1). Axillars barred. **241. Greater Yellow-legs.**
(b^1). Axillars not barred. **244. Willet.**
(b). Wing under 6.00.
(a^1). Axillars barred. **226. Wilson Snipe.**
(b^1). Axillars not barred. **225. American Woodcock.**

II. Bill under 2.00.
A. Toes 3. **238. Sanderling.**
B. Toes 4.
1. Tail barred.
a. Wing under 4.50. **248. Spotted Sandpiper.**
b. Wing over 5.00.
(1). Wing over 6.00.
(a). Tail feathers showing much white. **242. Yellow-legs.**
(b). Tail feathers without white. **246. Bartramian Sandpiper.**
(2). Wing under 5.50.
(a). Upper parts spotted with white. **243. Solitary Sandpiper.**
(b). Upper parts not spotted with white. **247. Buff-breasted Sandpiper.**
2. Tail not barred.
a. Bill over 1.10.
(1). Wing over 6.50. **230. Knot.**
(2). Wing about 6.00. **245. Ruff.**
(3). Wing under 5.75.
(a). Tarsus over 1.50. **229. Stilt Sandpiper.**
(b). Tarsus under 1.50.
(a^1). With white in the wing. **231. Purple Sandpiper.**
(b^1). Without white in the wing. **232. Pectoral Sandpiper.**
(c^1). Without white in wing, belly with black. **236. Red-backed Sandpiper.**
b. Bill under 1.00.
(1). Wing over 4.50.
(a). Upper tail-coverts white. **233. White-rumped Sandpiper.**
(b). Upper tail-coverts fuscous. **234. Baird Sandpiper.**
(2). Wing under 4.00.
(a). Toes partly webbed. **237. Semipalmated Sandpiper.**
(b). Toes not webbed. **235. Least Sandpiper.**

Family 4. RECURVIROSTRIDAE. **Avocets and Stilts.**

These long slender billed birds, with the bill turning upward, are striking in appearance. Their long legs make true waders of them, while the long bill enables them to read the bottom of the shallow water without the necessity of immersing the whole head and neck.

I. Bill over 3.25. **252. American Avocet.**

II. Bill under 2.50. **253. Black-necked Stilt.**

Family 5. PHALAROPODIDAE. **Phalaropes.**

The Phalaropes are essentially sea birds, but they pass to and fro across the country, sometimes resting on the smaller waters. They swim readily. The female is the larger and brighter colored, contrary to the general rule among birds.

I. Bill over 1 inch long. **256. Wilson Phalarope.**

II. Bill under 1 inch long.
- A Wing under 5.00. **255. Northern Phalarope.**
- B. Wing over 5.00. **254. Red Phalarope.**

ORDER 12. LONGIPENNES. Gulls, Terns, Jaegers.

Family 1. STERCORARIIDAE. **Jaegers.**

The Jaegers are the hawks among the Longipennes. They combine great powers of flight with the nature of a bully, stealing the fish from Gulls and Terns in preference to catching it themselves. They reach Ohio only during the migrations or as wanderers from other localities.

I. Length over 20 inches, middle tail feathers not pointed. **257. Pomarine Jeager.**

II. Length under 18 inches, middle tail feathers pointed. **258. Parasitic Jaeger.**

Family 2. LARIDAE. **Gulls and Terns.**

The members of this family agree in having long, pointed wings, and a bill without a hook at its tip. The subfamilies differ enough in form and habits to deserve separate treatment.

Subfamily 1. LARINAE. **Gulls.**

The Gulls comprise the larger members of the family Laridæ. They differ from the Terns in having a square tail, a bill slightly bent down, and the head either wholly black or without black on the crown. They fly with the bill pointing forward in a line with the body. They snatch fish or refuse from the surface of the water, often alighting upon the water, but do not dive for fish, as the Terns do.

I. Length over 23 inches.
- A. Back dark slaty. **261. Great Black-backed Gull.**
- B. Back pearl-gray.
  - 1. Black on outer primaries. **262. Herring Gull.**
  - 2. No black on the primaries. **260. Iceland Gull.**
- C. Back usually grayish or brownish, usually marked with darker.
  - 1. Tail dark.
    - a. Wing over 18 inches. **261. Great Black-backed Gull.**
    - b. Wing under 18 inches. **262. Herring Gull.**
  - 2. Tail light. **260. Iceland Gull.**

II. Length under 20 inches.
- A. Tail pure white.
  - 1. Head and neck slaty-black.
    - a. Outer primary mostly black. **265. Sabine Gull.**
    - b. Outer primary mostly white. **264. Bonaparte Gull.**
  - 2. Head and neck white, or washed with pearl gray. **259. Kittiwake.**
  - 3. Bill crossed by a dark band. **263. Ring-billed Gull.**
- B. Tail marked with black.
  - 1. Hind toe without a nail. **259. Kittiwake.**
  - 2. Hind toe with a nail. **264. Bonaparte Gull.**

Subfamily 2. STERNINAE. **Terns.**

All of the Terns found in Ohio have deeply forked tails. They fly with the bill pointing downward instead of forward, and dive from over the water for fish which may be seen under the surface. The bill is almost straight and sharply pointed. Most of our species have the top of the head and neck jet black in full plumage. They usually nest in colonies on the sand and gravel of the beach, or in the marshes upon floating decaying vegetation.

I. Length over 20 inches. **267. Caspian Tern.**

II. Length under 16 inches.
- A. Length over 13 inches.
  - 1. Whole top of head black.
    - a. Bill wholly or mostly black.
      - (1). Outer tail feathers pure white. **270. Roseate Tern.**
      - (2). Inner web of outer tail feather gray. **268. Forster Tern.**
      - (3). Tail forked for less than 2 inches. **266. Gull-billed Tern.**
    - b. Bill not black.
      - (1). Under parts pure white. **268. Forster Tern.**
      - (2). Under parts grayish. **269. Common Tern.**
  - 2. Forehead or crown white or gray.
    - a. Whole outer tail feather white. **270. Roseate Tern.**
    - b. Inner web of outer tail feather not white. **268. Forster Tern.**
    - c. Outer web of outer tail feathers darker than inner web. **269. Common Tern.**
- B. Length under 11 inches.
  - 1. Under parts white. **271. Least Tern.**
  - 2. Under parts black. **272. Black Tern.**

Order 13. ANSERES. Ducks, Geese, Swans.

Subfamily 1. Merginae. **Mergansers.**

To this group belong the "fish ducks" par excellence. They feed largely upon fish which they are enabled to catch with their toothed, hawk-like bills. They dive readily and for considerable distances, pursuing the fish under water. They are found about streams and considerable bodies of water, some individuals of the larger species remaining in the state during the winter where open waters afford good feeding places.

I. Length under 18 inches. A conspicuous hood. **309. Hooded Merganser.**

II. Length over 21 inches.
- A. Head and throat black.
  - 1. Under parts white, tinged with salmon. **307. American Merganser.**
  - 2. Breast brownish, heavily streaked with black. **308. Red-breasted Merganser.**
- B. Head and sides of neck rufous-brown. **307. American Merganser.**
- C. Head and sides of neck grayish-brown, washed with rufous. **308. Red-breasted Merganser.**

Subfamily 2. Anatinae. **River and Pond Ducks.**

The members of this group may be known at once by the absence of a flap or lobe on the hind toe. They feed in shallow water, immersing only part of the body, and hence are called 'Tip-ups'. A feeding flock with heads down and tails in the air looks like the scoring end of a bowling alley. They take wing readily from the water.

I. Length under 17.00 inches.
- A. Under parts chestnut-rufous. **289. Cinnamon Teal.**
- B. Under parts not chestnut-rufous.
  - 1. Lesser wing-coverts blue. **288. Blue-winged Teal.**
  - 2. Lesser wing-coverts gray. **287. Green-winged Teal.**

II. Length over 18.00 inches.
- A. Belly not conspicuously streaked or spotted.
  - 1. Head shining dark green. **281. Mallard.**
  - 2. Center of head white or whitish. **286. Baldpate.**
  - 3. Crown greenish, throat white. **292. Wood Duck.**
  - 4. Crown buffy, throat blackish. **285. Widgeon.**
  - 5. Crown dark olive-brown. **291. Pintail.**
  - 6. Crown finely streaked with black.
    - a. Wing-coverts with chestnut. **284. Gadwall.**
    - b. Wing coverts without chestnut.
      - (1). Sides barred with black. **291. Pintail.**
      - (2). Sides plain brown. **286. Baldpate.**
      - (3). Sides spotted with black. **284. Gadwall.**
- B. Belly conspicuously marked, or chestnut.
  - 1. Wing-coverts with white.
    - a. Lesser wing-coverts bluish. **290. Shoveller.**
    - b. Lesser wing-coverts brownish-gray.

(1). Speculum purple.	**281. Mallard.**
(2). Speculum gray or white.	**284. Gadwall.**
2. Wing-coverts without white.	
a. Legs yellowish, smaller.	**282. Black Duck.**
b. Legs reddish, larger.	**283. Red-legged Black Duck.**
3. Under parts chestnut.	**284. Gadwall.**

Subfamily 3. FULIGULINAE. **Sea and Bay Ducks.**

This group of ducks inhabits the deeper waters. They dive to a considerable depth, often, for fish. Some are almost as expert divers as the famed grebes and loons. They feed upon almost any aquatic animals or vegetables. Some are considered a table delicacy, while others are of a decidedly fishy flavor.

I. Whole head and neck black.	
A. Plumage entirely black.	**304. American Scoter.**
B. Plumage not entirely black.	
1. Bill with a bluish band near its tip.	**297. Ring-necked Duck.**
2. Bill plain bluish.	
a. Back of head with purplish reflections.	**296. Lesser Scaup Duck.**
b. Back of head with greenish reflections.	**295. American Scaup Duck.**
II. Head and neck rufous or rufous-brown.	
A. Head and neck rufous.	
1. Bill under 2.00.	**293. Redhead.**
2. Bill over 2.00.	**294. Canvasback.**
B. Head and neck rufous-brown.	
1. Wing with a white patch.	
a. Region at base of bill not white	**298 & 299. American and Barrows Golden-eyes.**
b. Region at base of bill white.	
(1). Wing over 8.25.	**295. American Scaup Duck.**
(2). Wing under 8.25.	**296. Lesser Scaup Duck.**
2. No white in wing.	
a. Bill over 2.00.	**294. Canvasback.**
b. Bill under 2.00.	
(1). Wing over 8.00.	**293. Redhead.**
(2). Wing under 8.00.	**297. Ring-necked Duck.**
c. Middle tail feathers long and slender.	**301. Old-squaw.**
III. Head and throat steel blue or steel green.	
A. Steel green.	**298. American Golden eye.**
B. Steel blue.	**299. Barrows Golden-eye.**
IV. Head and neck otherwise.	
A. Wing over 10.00.	
1. Bill over 2.00.	**302. American Eider.**
2. Bill under 2.00.	
a. Speculum white.	**305. White-winged Scoter.**
b. Speculum not white.	**303. King Eider.**
B. Wing under 7.00.	
1. Tail feathers normal.	**300. Bufflehead.**
2. Tail feathers stiff and slender.	**306. Ruddy Duck.**

Subfamily 4. ANSERINAE. **Geese.**

Like the river and pond ducks, the geese feed in the water by tipping instead of diving, for which their large bodies are not adapted. They are vegetarians, and forage a great deal in fields, picking up scattered grain. Rarely large flocks may damage newly sown or newly sprouting fields of grain. They like the tender shoots of grass and grains.

I. Head black, throat white.	
A. Length 35 or more.	**279. Canada Goose.**
B. Length 34 or less.	**280. Hutchins Goose.**
II. Head black, throat black.	
A. With less white below.	(*Hypothetical*) **Brant.**
B. With more white below.	(*Hypothetical*) **White-bellied Brant.**
III. Whole head or forehead white.	
A. Forehead white.	**278. American White-fronted Goose.**

B. Whole head and neck white, grayish or rusty.
  1. Primaries black, rest of plumage white.
    a. Wing more than 17.00. **276. Greater Snow Goose.**
    b. Wing 17.00 or less. **275. Lesser Snow Goose.**
  2. Back grayish brown.
    a. Wings without conspicuous white. **277. Blue Goose.**
    b. Wings with conspicuous white.
      (1). Wing more than 17.00. **276. Greater Snow Goose.**
      (2). Wing 17.00 or less. **275. Lesser Snow Goose.**

IV. Head and neck brown. bill yellow.
  A. Rump fuscous. **278. American White=fronted Goose.**
  B. Rump gray. **277. Blue Goose.** (*im.*)

Subfamily 5. CYGNINAE. **Swans.**

The general form of the swans is too well known to call for comment here. The long neck enables them to feed upon the bottom of shallow pools without tipping up in the undignified manner of the geese. They migrate in flocks much after the manner of the geese, and seem to feed on both vegetable matter and aquatic insects.

273. Whistling Swan.
274. Trumpeter Swan.

ORDER 14. STEGANOPODES. Pelicans, Cormorants, etc.

Family 1. FREGATIDAE. **Man=o'=War Birds.**

The single member of this family which has been found in Ohio must be regarded as an accidental visitor, not likely to be found again. **312. Man=o'=War Bird.**

Family 2. PELECANIDAE. **Pelicans.**

The American White Pelican is the only representative of this family in Ohio. It may be known at once by its great size, white plumage and enormous pouch hanging from the lower side of the bill. It is found only about considerable bodies of water, or the vicinity of them, where it must feed. **311. American White Pelican.**

Family 3. PHALACROCORACIDAE. **Cormorants.**

There appears to be but a single species of this family in the Ohio list of birds. Examination of the only specimen of Cormorant taken in the state, and supposed to be the Florida form, fails to verify the supposition that the birds found breeding at the St. Mary's Reservoir many years ago were form *floridanus*. The Cormorants look like geese while flying, but may be distinguished from them by the hoarse croak. The Ohio form is *Phalacrocorax dilophus*.

310. Double=crested Cormorant.

ORDER 16. PYGOPODES. Diving Birds.

Family 1. PODICIPIDAE. **Grebes.**

The Grebes will seldom be seen anywhere except in the water, where they are perfectly at home. They may be readily distinguished from all other swimming birds by the absence of a tail. When suspicious of danger they swim with most or all of the body beneath the water, and if hard pressed will protrude only the bill far enough to breathe. Witch-like escapes may often be attributed to this power.

I. Large. over 18 inches long. **314. Holboell Grebe.**

II. Smaller, less than 16 inches long.
  A. Bill slender, less than a third as deep at base as long. **315. Horned Grebe.**
  B. Bill about half as deep as base as long. **316. Pied=billed Grebe.**

Family 2. GAVIIDAE. **Loons.**

All of the Loons which visit Ohio are large birds, seldom visiting small bodies of water in their migrations. They resemble the Grebes in habits, eating much the same aquatic life. Their weird calls, like the laughter of a maniac, have given them their name. Their quickness in diving enabled them to escape the shot from an old flint-lock or percussion cap gun, but modern smokeless powder often proves their undoing.

I. Throat gray, neck chestnut-brown. **319. Red-throated Loon.**

II. Throat black.

A. Head black, a white throat-band. **317. Loon.**

B. Head ashy. **318. Black-throated Loon.**

III. Throat whitish.

A. Back spotted with white. **319. Red-throated Loon.**

B. Back margined with grayish.

1. Wing over 13 inches long. **317. Loon.**
2. Wing under 13 inches long. **318. Black-throated Loon.**

Family 3. ALCIDAE. **Murres, Auks, Puffins.**

One member of this family has been found on Lake Erie after a severe northeast storm. It is not likely that others will be found there again under normal conditions. Birds comprising this family are ocean birds, and being short winged, do not wander inland voluntarily.

320. Brunnich Murre.

TABLE OF COMPARISONS.

	INCHES.
Pygmy size	up to 5.00
Warbler size	5.00- 6.00
Sparrow size	6.00- 7.50
Chewink size	7.50- 9.00
Robin size	9.00-12.00
(Kingfisher size	12.00-14.00)
Little Hawk size	12.00-16.00
Crow size	16.00-22.00
Brant size	22.00-30.00
Eagle size	30.00 and upwards

Besides these, numerous comparisons have been made, Killdeer size, Mallard size, etc., which if not immediately explainable by the context may be determined by reference to the descriptions of these birds.

Measurements are given in inches and hundredths and in millimeters, the latter enclosed in parenthesis.

THE BIRDS OF OHIO.

No. 1.

NORTHERN RAVEN.

A. O. U. No. 486a. **Corvus corax principalis** Ridgw.

Description.—Color, uniform lustrous black; plumage, especially on breast, scapulars and back, showing steel-blue or purplish iridescence; feathers of the throat long, narrow and pointed. Length about two feet, averaging over rather than under; wing 17.00-18.00 (431.8-457.2); tail 10.00 (254.); bill 3.00 (76.2), depth of bill at nostril 1.00 (25.4).

Recognition Marks.—Large size,—about twice as large as a Crow; uniform black coloration; harsh croaking notes.

Nest, a large but compact mass of sticks, lined with grass, wool, etc., placed high in trees or upon inaccessible cliffs. *Eggs,* 2-8, usually 5, pale bluish green or olive, spotted, blotched and dashed with greenish brown and obscure lilac or purplish. Av. size, 1.80-2.07 x 1.30-1.40 (45.7-52.6 x 33.-35.6).

General Range.—Northern North America, south to British Columbia, northern Michigan, New Brunswick, Maine, New Jersey, North Carolina, etc.

Range in Ohio.—Abundant in Wilson's time along the Lake Erie shore. Now found only in Fulton County (Jones).

ALTHO so little known to most of us, it seems altogether proper to begin our consideration of the birds of Ohio with one which Professor Alfred Newton calls "the largest of the Birds of the Order *Passeres,* and probably the most highly developed of all Birds." The Raven, too, has been until lately, and from time immemorial, one of the most familiar objects within the ken of man. The Aryan herdsman complained to his fellow of the bird's depredations, while the Dorian fishermen of a later day regaled each other with stories of his sagacity already centuries old. *Korax,* the Greek called him, in imitation of his hoarse cry, *Craack, Craack,* while the Sanscrit name *Karava* reveals the ancient root from which have sprung both Crow and Raven.

Quick-sighted, cunning and audacious, this bird of sinister appearance has been invested by peoples of all ages with a mysterious and semi-sacred character. His ominous croakings were thought to have prophetic import, while his preternatural shrewdness has made him with many a symbol of divine knowledge. A less reverent age has doomed this ancient marauder to an over-hasty destruction. While it is true that he has robbed birds' nests, fallen upon wounded sheep, and taken toll of the tender lambs since the world began, his services as scavenger, insect-eater, and mole-destroyer have been infinitely greater, and for sentimental reasons, if for no other, the world could ill afford to part with the bird whose sable thread has followed all the windings of human history.

The Raven has more dignity, and as a species, less flexibility than the Crow. As a result, altho it is exceedingly wary, the relentless warfare of the pioneers has thrust it almost entirely out of bounds, so far as the Eastern United States is concerned. While Wilson reported it as common in the northern part of this state at the beginning of the last century, only stragglers from the far north are noted nowadays,—unless, indeed, it should prove to be found breeding in Fulton County, as has been recently asserted. In this case the bird should receive rigid protection.

With the Raven's habits we cannot largely concern ourselves here. According to Captain Bendire (who observed a closely allied form in the West) "their ordinary call note is a loud *Craack, craack,* varied sometimes by a deep grunting *koerr, koerr,* and again by a clucking, a sort of self-satisfied sound, difficult to reproduce on paper, in fact they utter a variety of notes when at ease and undisturbed, among others a metallic sounding *klunk,* which seems to cost them considerable effort." The Ravens do not associate very intimately with others of their kind, but a pair of them are mated for life. Each spring the birds indulge in amorous antics which are decidedly *infra dig.,* turning somersaults in the air, trying to fly on their backs, etc. Unlike the Crows, these birds repair the same nest year after year, and their local attachments are very strong. In these circumstances, no doubt, is to be found one element of the racial weakness in the presence of oncoming civilization. On the other hand, Ravens attain a great age, specimens having been kept in captivity upwards of a hundred years.

1

AMERICAN CROW

Corvus americanus

½ Life-size

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No. 2.

AMERICAN CROW.

A. O. U. No. 488. **Corvus americanus** Aud.

Description.—Entire plumage glossy black, for the most part with greenish-blue, steel-blue and purplish reflections; feathers of the neck normal, rounded. Length 17.00-21.00 (431.8-533.4); wing 12.00-14.00 (304.8-355.6); tail 7.00-8.00 (177.8-203.2); bill 1.80-2.05 (45.7-52.1), depth at base .72-.84 (18.3-21.3). Female averages smaller than male.

Nest, a neat hemisphere of sticks lined carefully with bark, roots and trash, and placed 10-90 feet high in trees. *Eggs*, 4-7, usually 5, same coloring as Raven's. Occasionally fine markings produce a uniform olive-green effect. Av. size, 1.60 x 1.20 (40.6 x 30.5).

General Range.—North America at large, except Arctic regions and Florida. In the latter region replaced by *C. a. pascuus*. Of local distribution in the West.

Range in Ohio.—Of general occurrence. Retires irregularly from the northern portion of the state in winter.

Photo by the Author.

GATHERING STORM AT THE CROW WOODS.

CHESTER HEIGHTS (NEAR COLUMBUS) WAS A WELL KNOWN CROW NESTING RESORT JUST PREVIOUS TO ITS PRESENT OCCUPATION BY STYLISH RESIDENCES.

THE Crow's year properly begins with the disbanding of the winter roost in late February or early March. When the first south wind bursts into the chilly atelier of spring, siezes a brush and paints the eastern sky with somber blues and piled up grays, his picture is incomplete until there is stretched across the canvas a long black line of the hurrying birds. Crows

are the busybodies of early springtime. Once arrived in their familiar haunts, they peer into last year's birds' nests, inspect fence-rows, discuss the changes wrought by the wood chopper, hold noisy caucuses in the beech woods, or gather fagots for the early nesting, and their clamor becomes an integral part of the season's impress.

The dusky bird is a notorious mischief-maker, but he is not quite so black as he has been painted. More than any other bird he has successfully matched his wits against those of man, and his frequent easy victories and consequent boastings are responsible in large measure for the unsavory reputation in which he is held. It is a familiar adage in ebony circles that the proper study of Crow-kind is man, and so well has he pursued this study that he may fairly be said to hold his own in spite of fierce and ingenious persecution. He rejoices in the name of outlaw, and ages of ill treatment have only served to sharpen his wits and intensify his cunning.

That the warfare waged against him is largely unnecessary and partly unjust has been pretty clearly proven of late by the scientists who have investigated the Crow's food habits. It is true that he destroys large numbers of eggs and nestlings, and that, if allowed to, he will occasionally invade the poultry yard,—and for such conduct there can be no apology. It is true also that some damage is inflicted upon corn in the roasting-ear stage, and that corn left out through the winter constitutes a staple article of Crow diet. But it must be remembered that birds and eggs form only about one-half of one per cent of their fare through the year, and that in the case of corn, they perform conspicuous services in raising the crop. Professor A. W. Butler, of Indiana, who has given the matter special attention, says: "Most persons are disposed to note losses oftener and remember them longer than benefits. It (the Crow) is found to eat many insects. May beetles, June bugs, and noxious beetles, and quantities of them, are fed to their young. Grasshoppers are eaten all summer, but form the bulk of their food in August. Besides these, many bugs, caterpillars, cut-worms, spiders, etc., are eaten. . . . . It is thought in the more thickly settled portions of the country that the Crow does more good than harm, and if precautions are taken to protect the nests and young poultry and corn, its damage would not be of any considerable consequence."

There is no reasonable question that the Crow is the smartest bird within our borders. He is such a delightful rascal that he makes an interesting pet, as every wide-awake farmer's boy can testify. If taken from the nest and well treated, a young Crow can be given such a large measure of freedom as to fully justify the experiment from a humanitarian standpoint. Altho scattered anecdotes of Crow ways fill the pages of popular literature, it is matter of regret that a complete treatise on the psychology of the Crow has never been produced. Such a work would not only afford entertaining reading, but

would contribute to a sympathetic understanding of the black brother who is only less intelligent than we.

Every one knows that Crows talk. Their cry is usually represented by a single syllable, *caw,* but it is capable of many and important modifications. For instance, *keraw, keraw,* comes from some irritated and apprehensive female who is trying to smuggle a stick into the grove. *Kawk-kawk-kawk,* proclaims sudden danger, and puts the flock into instant commotion; while *caw-aw, caw-aw, caw-aw,* reassures them again. Once, in winter, when the bird-man was screech-owling for sport, a company of Crows settled in the tops of neighboring trees, and earnestly discussed the probable nature of the object half-concealed under a camera cloth. Finally they gave it up and withdrew, as I supposed. It seems that one old fellow was not satisfied, for as I ventured at last to shift ever so little from my strained position, he set up a derisive *"Ca-a-a-w,"* from a branch over my head—as who should say, "Aw, ye can't fool me. Y're just a ma-a-a-n" — and flapped away in disgust.

Taken near Columbus. *Photo by the Author.*

CROW'S NEST IN BEECH TREE.

The final Crow philology also is still unwritten. The Corvine tongue would be worthy the attention of Professor Garner were it not for the fact that expletives preponderate.

Space fails to describe the elaborate structure of Crow society, to tell of the military and pedagogical systems which they enforce, of the courts of justice and penal institutions which they maintain, of the vigilantes who visit vengeance upon evil-minded owls and other offenders, or even of the games which they play,—tag, hide-and-seek, blind-man's buff and pull-away,—but a word must be spared for that most serious business of life, nesting.

A typical Crow's nest is a very substantial affair, as our illustration shows. Upon a basis of coarse sticks a mat of dried leaves, grasses, bark-strips and dirt, or mud, is impressed. The deep, rounded bowl thus formed is carefully lined with strips of grape-vine bark, twine, horse-hair, wool and

the like. When completed, the nest is about seven inches across and three deep inside. The expression "crow's nest," as used to indicate disarray, really arises from the consideration of *old* nests. Since the birds resort to the same locality year after year, but never use an old nest, the neighboring structures of successive years come to represent every stage of dilapidation.

Normally Crows nest at middle heights in convenient trees in small woodlands, but under the stress of persecution they rise to greater heights and choose inaccessible trees, such as shell-bark hickories or giant elms. I once located a nest in the northern part of the state at a height of a hundred and ten feet in an elm tree five feet in diameter. Since the nest did *not* belong to a Swallow-tailed Kite, the eggs were not disturbed. On the other hand, the birds sometimes throw themselves on our mercy and build within fifteen or twenty feet of the ground, and in very climbable trees.

The eggs vary interminably in coloration, but the type is strongly marked. In a recent monograph[1] it was deemed advisable to give a particular description of fifty sets in order to cover the range of variation. Perhaps the most remarkable set that has come to light, at least in Ohio, was one found in the spring of 1892 near Oberlin. The four eggs which comprise the set are entirely unmarked, of a pale blue color, not unlike that of Cooper Hawk's eggs. They were taken by myself at two different times, under circumstances which would seem to preclude the possibility of mistake in identity. A friend from Ontario, Rev. Giles G. Brown, who saw the eggs, assured me that all which he had ever seen near his native home were of the same description.

Photo by Griggs & Tyler.
CROW NESTING.

April is the usual month for nesting, but birds are sometimes seen gathering nest materials during the first week in March, and incubation is often under way before the end of the month. Only one brood is provided for in a season unless some accident befalls the first, in which case another nest is more hastily prepared at some distance from the scene of former disaster. Deposition of

1 The American Crow, by Frank L. Burns, Bulletin No. 5 of the Wilson Ornithological Chapter.

eggs may occur on successive or alternate days and the period of incubation is variously estimated at from fourteen to eighteen days.

It has been supposed that the Crow retires from our state except in very mild winters. My impression is that this is not usually the case, but that the birds congregate in vast winter companies or "roosts" of local restriction, and chiefly within our borders. Ten such roosts have been reported by Professor Butler from the neighboring state of Indiana, and it is improbable that the habit of our birds materially differs. I have information of five such roosts (including one across the Ohio River in West Virginia, opposite Gallia County, and which is largely patronized by Ohio birds), noted at different times, but have no definite assurance of their permanency. A complete record of the winter distribution of the Crow in our state is very much to be desired.

Concerning the relative abundance of Crows, as compared with former times, little can be positively determined. The continued denudation of our timber throws many species of birds into false prominence, which may be altogether misleading. Dr. Wheaton reported a notable decrease in the vicinity of Columbus twenty years ago. They are abundant now. The species is subject to an epidemic called "roup," which assails the birds in their winter quarters and materially reduces their numbers. This disease affects the eyes as well as the pharynx and nasal passages, and has given rise to the belief that the birds freeze their eyes at night in cold weather,—an absurd supposition, since the head is securely tucked under the wing during the hours of slumber.

Photo by J. B. Parker.

No. 3.

BLUE JAY.

A. O. U. No. 477. **Cyanocitta cristata** (Linn.).

Description.—Above, grayish-blue with a purple cast; below, smoky or sordid gray; a black collar continues up the sides of the neck and underlies the conspicuous blue-gray crest; frontlet and lores black; throat and sides of head gray with a delicate purplish suffusion; wings and tail brighter blue, finely banded with black; greater coverts and secondaries of wing, and tail feathers, except middle pair, broadly tipped with white; bill and feet black. Length 11.00-12.50 (279.4-317.5); wing 5.00-6.00 (127.-152.4); tail 5.00-6.00 (127.-152.4); bill 1.00-1.25 (25.4-31.8); tarsus 1.00-1.10 (25.4-27.9). A typical male in the O. S. U. collection measures: wing 5.25 (133.3); tail 5.40 (137.2); bill 1.03 (26.2); tarsus 1.09 (27.7). The female averages smaller than the male and is not so brightly colored.

Recognition Marks.—Jay size; bright blue coloring. This is one of four or five species which everybody knows.

Nest, a compact structure of sticks and roots, lined, almost invariably, with fine brown rootlets, and placed in a crotch or branch of a tree, usually near the trunk, ten to thirty feet up. *Eggs,* 3-6, bluish-green, olive-green, ashy-brown, or bistre, dotted and blotched with olive and cinnamon-brown. Av. size, 1.10 x .85 (27.9 x 21.6).

General Range.—Eastern North America to the Plains, and from the Fur Countries south to Florida and Eastern Texas.

Range in Ohio.—Of universal distribution. Resident; common in middle and northern portions, but less frequent southerly.

"BEAUTY and the Beast" find joint representation in this most familiar inhabitant of village and woodland. Beautiful he undoubtedly is in his panoply of blue and white, and we are moved to an admiration which is never quite dispelled; but the heart of him is deceitful and cruel beyond belief. The Blue Jay is the outlaw among birds, no romantic Musolino, beloved by the masses and hated by the few, but a plain bad bird, whose only virtues are such as to merit slight appreciation in the bird world proper. Cunning, mischievous, thieving, cruel, noisy, boastful, quarrelsome, treacherous, wanton—one is tempted to empty the vials of opprobrious epithets upon his devoted head—but the vision of his saucy beauty and the memory of his ringing *delary, delary,* stays, as it always will, the hand of justice.

The trouble with Blue Jay is that we all fall in love with him in the winter when he is being good, but lose sight of him in the spring and summer when he is practicing his villainies. In the winter time the flashing blue of the Jay's plumage, most resplendent then, is a welcome sight among the barren hedgerows or about the chilly outbuildings, which he explores for stray bits of honest food; or a roistering company of them sweep through the grove and set it ring-

ing with shrill laughter, mocking the frost and bidding defiance to the north wind, until the heart leaps in answer. In early spring, too, the Blue Jays are in highest spirits. They gather about some mock-modest raconteur in the tree-tops, and whisper and snicker in subdued fashion until the point of the story is reached, when they explode with sudden mirth and fall out of the tree shrieking with laughter. If you appear on the scene just then, they proclaim your advance to all creation by shrill cries of *Jay, Jay,* and with an arrogance of virtue which makes you question your own motives.

Taken near Oberlin. *Photo by the Author.*

BLUE JAY ON NEST.
NEST PLACED 25 FEET UP AGAINST TRUNK OF FOREST TREE.

But early in April the Blue Jay becomes strangely silent. The nesting season is on, and the bird has good reason to keep the matter quiet. In orchard trees or front-yard evergreens, but oftener in the depth of the forest, the wily birds steal their nests. Not a sound is made while the sticks are laid and the rootlets gathered. No whistle or call betrays the secret of the spotted eggs, and people begin to wonder what has become of the Blue Jays. Meanwhile the Jays are beginning to feast on strange sweets. Many a punctured egg of Sparrow, Vireo, or Robin bears witness to the stealthy visit or open brigandage of these marauders.

When their young are hatched, the pillage and carnage increases fourfold. Every discoverable nest, not successfully defended by its owner, is laid under tribute to provide eggs or tender young for the baby monsters at home. Altho so bloodthirsty, the treacherous blue-coat is not especially brave, and when set upon by the outraged parents, he (or she) usually beats a hasty retreat, screaming at a fearful rate. Even the Robin must guard her treasures with the greatest diligence or this crafty pilferer will desolate her home. The Blue Jays are not over careful either, and the appearance of one in

the Robin tree is the signal for a fight, which is but one of millions in the process of a feud already centuries old.

In view of Blue Jay's sins, it affords a legitimate satisfaction to recall a sight which met my gaze early one morning in May,—a Crow robbing a Blue Jay's nest. Four eggs—one, two, three, four—were extracted by the relentless claw of fate, while the agonized, if unrepentant, parents plead for mercy. The Crow is no saint, but he does not cloak his villainies under a garb of blue and white.

Taken near Buckeye Lake. Photo by the Author.

NEST AND EGGS OF BLUE JAY
FIFTEEN FEET HIGH IN SWAMP WILLOW.

For sheer naughtiness, too, commend us to the pleasant habit which the Blue Jay has of secreting himself in some thicket and imitating the notes of hawks or other birds or beasts of prey. The *ke-ah* note of the Red-shouldered Hawk is a favorite instrument of terror, and the *killy-killy* note of the Sparrow Hawk is no less cleverly handled. Once, in winter, having just heard and seen an authentic Butcher-bird, I hastened over to a copse upon hearing a repetition of the cry. Here I found a Blue Jay holding a company of Tree Sparrows nearly paralyzed with fright while he produced the well-known clinking and buzzing notes of the Northern Shrike. Is it too much to believe that he chuckled with fiendish glee after this performance?

The notes and cries of this bird are always of interest, and by a little attention one may soon learn to tell from them what kind of mischief is afoot. Pure *jay, jay* is used when alighting or greeting comrades, or in assembling the clan. *Dayick, dayick* is the raucous note of mischief or mere clamor. *Delary, delary* is the sound pressed out during those extraordinary springing motions which the bird describes through the whole arc of his physical reach. It seems to be used both to announce a discovery, to summon or warn friends, or as a preparatory flight call. This *delary* is often preceded by a mellow *toob, toob,* of puzzling origin, and the flight itself is often accompanied by a rich ringing *Che-klung-oo-i.* Besides these, there are, of course, various soliloquizing and conversational notes, and these on occasion may reach the doubtful dignity of song.

If we can say little that is good of the Blue Jay, all must agree that he is an interesting character; and our moral duty toward him and those upon whom he preys will probably be best observed, not by a policy of ruthless extermination, but by keeping the species *within bounds.*

2

BOBOLINK
Dolichonyx oryzivorus
¾ Life-size

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No. 4.

BOBOLINK.

A. O. U. No. 494. **Dolichonyx oryzivorus** (Linn.).

Synonyms.—SKUNK BLACKBIRD; REED-BIRD; RICE-BIRD; MEADOW-WINK.

Description.—*Adult male, breeding plumage*: Head and below, rich glossy black,—the feathers having at first a buffy edging which wears off as the season advances; a broad nuchal patch of strong buff or cream; scapulars, lower back, rump, and upper tail-coverts pale white; middle back gray; upper back, wings and tail glossy to dead black with various buffy edging; tail-feathers sharply pointed; bill dull black; feet brown. *Adult female*: Ground color of plumage olive-buff,—clearest below, and in median crown, superciliary, and inter-scapular stripes; the remainder black and brownish-fuscous. *Adults in fall, and young*: Like female in spring, but buffier and with less black throughout. Length 7.00-7.50 (177.8-190.5); wing 3.00-4.00 (76.2-101.6); tail 2.75-3.00 (69.8-76.2); bill .55 (14.); tarsus .90-1.00 (22.9-25.4). Female averages a half-inch shorter, with similar proportions.

Recognition Marks.—Chewink size; black, white, and buff plumage of breeding male. The breeding female is a shy and obscurely colored bird, to be recognized by the amateur mainly through the attentions of the male. At other seasons both sexes and all ages may be known by the frequently uttered *dink* cry. In the hand the acute tail-feathers are quite distinctive.

Nest, on the ground in meadows or deserted fields, a slight, grass-lined depression concealed with some art, but not definitely overarched. *Eggs,* 4-7, yellowish clay or stone-gray, heavily spotted and blotched with umber, drab, and even lavender. Av. size, .87 x .63 (22.1 x 16.).

General Range.—"Eastern North America, west to edge of Great Plains, breeding in Northern United States and more southern British Provinces; in winter south to West Indies and South America" (Ridgw.).

Range in Ohio.—"Abundant summer resident in northern, very common spring and fall migrant, less common summer resident and breeding in middle, and migrant only in southern Ohio" (Wheaton).

NEXT after Bluebird, the coming of Bobolink marks the broadest step in that golden stair of springtime, by which we yearly attain the height of ornithological joy. His coming heralds that tidal wave of migration which begins somewhere during the last week in April, and sweeps over us till the middle of May. Without waiting for their more modest mates, the males press northward, hot-winged, to riot for a while over the dank meadows in bachelor companies, and to perfect that marvel of tumultuous song. Oh how they sing! those Bacchanals of springtime. From fence-post or tree-top, or quivering in mid-air, they pour forth such an ecstacy of liquid gurgling notes as must thrill the very clods. Such exuberance of spirit, such reckless abandon of mirth-compelling joy would cure a sick preacher on blue Monday. As the bird sings he bows and scrapes and pirouettes till, as Wheaton says, "he re-

Photo by the Author.

BOBOLINKS.

sembles a French dancing master in uniform, singing, fiddling, dancing, and calling off at the same time."

But when some fine morning about a week later, a shy, plainly attired, brown lady drops from the sky with a soft *dink,* then it is that the passionate soul of the singer is fairly consumed by the inner fires of melody and desire. He dashes like mad after his lady love and pursues her at breakneck speed through the thickets of weeds and about fence-rows until he loses her in the grass. Then he hovers, or rather dances, in the air, over the spot where she vanished, or else retires to a fence-post, hard by, to make frantic protestations of his devotion. *Oh, geezeler, geezeler, gilpity, onkeler, oozeler, oo,* comes from that perfect throat; and somewhere between two blades of grass the lady is watching him—the sly minx—and chuckling softly to herself.

Once I heard a chorus of bachelors—or was it a musical contest?—where seven birds in the top of a little willow were singing with might and main. The effect of that wild melody of tinkling, palpitating and flute-like notes with its changeful syncopations and melodious discord will not soon be forgotten. It was an all star team of the world's most accomplished mirth makers.

All the world loves a lover, and such ardor as "Robert of Lincoln" displays is not in vain. With a heart completely won the female scrapes a little hollow in the ground amongst the tall grass of a meadow or deserted field. Here upon a slight lining of dried grass, she deposits five or six eggs, clay-colored with umber blotches, wonderfully like the ground. The owner is mistress of the art of concealment, and usually escapes detection even from the most inquisitive. In my experience, the female flushes at long distances, but even when she permits a close approach to the nest she herself skulks a long way before rising. If you care to spend an hour or so hunting for the treasures, the safest way is to mark the spot where the bird rose, and then hunt toward your original position along the line of approach.

During the incubation the male is the same rollicksome fellow that he was during courtship; but he sings faithfully to his sitting mate, and he religiously drives intruders from the critical portion of the field. If several pairs occupy one meadow, as is frequently the case, the males spend a good deal of time trying to compel each other to respect imaginary boundaries.

The moulting of the Bobolink is one of the most interesting phases of

Taken near Columbus. *Photo by the Author.*

WHERE BOBOLINKS NEST.

familiar bird life. When the male arrives in the spring he is apt to have some buffy or ashy skirting on his black feathers, but these soon disappear and he stands forth in a perfect livery of black, white and buff. Under the necessity of having to provide for a growing brood, all his gaiety leaves him. He becomes anxious, silent, and careworn. Barely are the youngsters able to shift for themselves, when the father doffs the wedding garments, and puts on a severely plain suit like that of the female. A month or so is spent by both old and young in recruiting strength—a season which is passed for the most part in loose flocks—and then the leisurely journey southward is begun, about the twentieth of August. The sole and characteristic note from this on is a metallic *dink* or *chink*. There is little concert about their southward movement, and the air in our latitude may resound with *dink* cries at any time of night, and often in the daytime, for a month. The birds gather in immense numbers in the reeds of the Chesapeake region, and are slaughtered by thousands for the market, where they are known as "Reed-birds." Later in their retreat they infest the rice-swamps of the Carolinas and Georgia, where they are also killed in great numbers, with perhaps some little show of justice. But surely if our Southern neighbors could realize of how much delicious music they deprive us another year, they would not be so cruel. It is a great pity that the burden of the musician's support does not fall more heavily upon us, for how cheerfully would we bear it!

No. 5.

COWBIRD.

A. O. U. No. 495. **Molothrus ater** (Bodd.).

Synonyms.—Cow Blackbird; Cuckold.

Description.—*Adult male*: Head and neck wood-, seal-, or coffee-brown (variable); remaining plumage black with metallic greenish or bluish iridescence. *Female*: Dark grayish brown, showing slight greenish reflections, darkest on wings and tail, lightening on breast and throat. *Young in first plumage*: Like female but lighter below and more or less streaky; above somewhat mottled by buffy edgings of feathers. The young males present a striking appearance when they are assuming the adult black, on the installment plan, by chunks and blotches. Length 7.50-8.00 (190.5-203.2); wing 4.40 (111.8); tail 3.00-3.40 (76.2-86.4); bill .65 (16.5); tarsus .95-1.10 (24.1-27.9). Female, length, wing, and tail one-half inch less.

Recognition Marks.—Chewink size; brown head and black body of male; brown of female.

Nesting.—The Cowbird invariably deposits her eggs in the nests of other birds. *Eggs,* 1 or 2, rarely 3 or 4, with a single hostess, white, often faintly tinged with bluish or greenish, evenly speckled with cinnamon, brown or umber. Av. size, .85 x .65 (21.6 x 16.5), but quite variable.

General Range.—United States from the Atlantic to the Pacific, north into southern British America, south in winter, into Mexico.

Range in Ohio.—Common throughout the state, but less so in heavily timbered regions.

IF it were given us to revise the economy of nature we should certainly place this fellow upon the proscribed list. Judged by every sentiment of justice, human and avian, he is an outlaw, and all other birds at least would thank us if we set a price upon his head. To show how thoroughly accepted the opinion is among ornithologists, I cannot do better than quote Mr. Frank M. Chapman: "As an outcast he makes the best of things and gathers about him a band of kindred spirits who know no law. There is an air about the group which tells the critical observer that their deeds are evil. No joyous song swells the throat of the male. His chief contribution to the chorus of springtime is a guttural bubbling produced with apparently nauseous effort. In small flocks they visit both pasture and woodland, and are given to following cattle, clustering about the feet of the herd, presumably to feed on the insects found there. They build no nest, and the females, lacking every moral instinct, leave their companions only long enough to deposit their eggs in the nests of other and smaller birds. I can imagine no sight more strongly suggestive of a thoroughly despicable nature than a female Cowbird sneaking through the trees

and bushes in search of a victim upon whom to shift the duties of motherhood." The egg thus surreptitiously placed in another bird's nest usually hatches two or three days before those of the foster mother, and thus the infant Cowbird gets a start which he is not slow to improve. Its loud clamoring for food often drives the old birds to abandon the task of incubation; or if the other eggs are allowed to remain until hatched, the uncouth stranger manages to usurp attention and food supplies, and not infrequently to override or stifle the other occupants of the nest, so that their dead bodies are removed to make room for his hogship. It is asserted by some that in the absence of the foster parents the young thug forcibly ejects the rightful heirs from the nests, after the fashion of the Old World Cuckoos. This is emphatically denied by others. I never caught the rascal in the act myself, but I once found a nest which contained only a lusty Cowbird, while three proper fledglings clung to the shrubbery below and one lay dead on the ground. The appearances were certainly against *Molothrus ater*.

When the misplaced tenderness of foster parents has done its utmost for the young upstart, he joins himself to some precious crew of his own blood, and the cycle of a changeling is complete.

It would be easy, not to say picturesque, to record a large number of unpleasant epithets which would justly apply to this bird. Sneak, cuckold, ingrate, are only a few examples. If any comfort at all is to be found from his presence in the bird world, it must be similar to that supplied by the presence of evil in the moral world. And some such value we do see through the expedients to which unwilling victims are driven in their efforts to rid themselves of the despised eggs. Perhaps some are able to remove the foreign egg from their nests, altho this is uncertain. Others promptly desert upon the first glimpse of the interloper. But others, more ingenious, are driven to build a second story to their nests and lay another set of eggs on the new floor. Instances are on record where a bird has thus constructed three stories, having been a second time defeated in the effort to avoid unpleasant responsibilities.

While it is true that the smaller birds, notably the Vireos, the Yellow Warbler, and the Field Sparrow, are most frequently imposed upon, such is not always the case. I have found eggs with the Red-winged Blackbird and the Cardinal. In the latter case the close resemblance of the eggs probably accomplished the deception of the owner herself.

The Cowbird's egg is of a peculiarly generalized form and pattern. While there is no evidence that it is varied for adaptation to particular hosts, it is surprising how closely it resembles the speckled eggs of many species, which are among themselves distinctive. Thus it often requires a second glance to distinguish it among the eggs of the Ovenbird, the Towhee, the Yellow-breasted Chat, the Field, Grasshopper, and Song Sparrows, and even the Yellow Warbler.

Much was formerly made, especially in New England, of the mysterious disappearance of the Cowbirds during the months of July and August. At this season they gather in large flocks, but are not much noticed because of their almost unbroken silence. Late in summer they are moulting and keep pretty closely to out-of-the-way woods during this trying time. In northern Ohio I have repeatedly watched companies of from five hundred to two thousand during August, as they passed silently about the tree-tops, or as they settled to their accustomed roosts in a grove. On the other hand I once spent ten days at the same season, along the Muskingum and Ohio Rivers, without seeing a single Cowbird. Yet I have no reason to doubt that there were as many birds in the latter region as in the former.

Specimens shot in August contained, besides small quantities of wheat gleaned from the ground, large numbers of grasshoppers. If one were ever disposed to be lenient toward this repulsive bird, it might well be during the grasshopper season.

Taken near Ashtabula. THE BIRDS' MIRROR. *Photo by F. D. Snyder.*

No. 6.

YELLOW-HEADED BLACKBIRD.

A. O. U. No. 497. **Xanthocephalus xanthocephalus** (Bonap.).

Description.—*Adult male*: Head, neck all around, and breast orange yellow; lores and feathers skirting eyes and bill, black; a double white patch on folded wing formed by greater and lesser coverts, but interrupted by black of bastard wing; usually a little yellow about vent and on tibiæ; the remaining plumage black, dull or subdued, and turning brown on wing-tips and tail. *Female*: Dark brown; line over eye, throat, and upper breast dull yellow. Length 10.00-11.00 (254.-279.4); wing 5.30-5.60 (134.6-142.2); tail 4.00-4.50 (101.6-114.3); bill .90 (22.); tarsus 1.25 (31.8). Female smaller, length 8.00-9.50 (203.2-241.3).

Recognition Marks.—Robin size; yellow head and breast.

"**Nest,** a light but large, thick-brimmed fabric of dried reeds and grasses slung to growing ones, 5-6 inches in diameter and about as deep. *Eggs,* 3-6, 1.00-1.15 (25.4-29.2) long by 0.75 (19.1) broad; grayish-green, spotted as in *Scolecophagus,* with reddish-brown, not scrawled as in *Agelaius*" (Coues).

General Range.—Western North America from Wisconsin, Illinois and Texas to the Pacific Coast, and from British Columbia and the Saskatchewan River southward to the Valley of Mexico. Accidental in Middle and Atlantic States.

Range in Ohio.—Of rare and casual occurrence only.

THIS Blackbird is essentially a bird of the Prairies, and it is eminently fitted for obtaining its living on the ground, since its legs and feet are strongly developed as if by and for scratching. Large numbers spend the winter sociably in the tule swamps of Texas and California, breaking up into smaller companies after the migration has been accomplished, and distributing themselves among the inland marshes of the Great Plains, and locally throughout the West, where they breed much after the fashion of Redwings. The species is of a rather roving disposition, one specimen having been taken in Greenland in 1820. Small bunches have several times been recognized on the wing by competent observers here in Ohio, and Wheaton cites the instance of a pair being seen in a low meadow near Groveport, in Franklin County, where it was thought to have bred, in the summer of 1873.

No. 7.

RED-WINGED BLACKBIRD.

A. O. U. No. 498. **Agelaius phœniceus** (Linn.).

Synonyms.—MARSH BLACKBIRD; SWAMP BLACKBIRD; REDWING; RED-SHOULDERED BLACKBIRD.

Description.—*Adult male*: Glossy black; "shoulder patches" (lesser wing coverts) of bright scarlet, partially concealed in repose by black scapulars and bound by a broad buff border posteriorly; bill and feet horn black. *Female*: Brownish gray, mottled and streaked, sharply below, less distinctly above; feathers of back edged by buff or bay, shoulders subdued red; throat, chin, cheeks, and superciliary stripe faintly ruddy. *Young*, similar to female, but darker. Young males exhibit every intermediate phase of plumage. *Males in fall* have their uniform black interrupted by whitish, buffy, and tawny edgings of the feathers. The epaulets at this season are a sickly orange-red. Males, length 9.00 (228.6); wing 4.84 (122.9); tail 3.82 (97.); bill .85 (21.6); depth of bill at base .50 (12.7). Female, length about 8.00 (203.2); wing 4.06 (103.1); tail 3.23 (82.); bill .76 (19.3); depth at base .43 (10.9).

Photo by E. B. Williamson.

A TYPICAL NESTING SWAMP.

Recognition Marks.—Chewink to Robin size; bright red epaulets of male; general streakiness of female.

Nest, a neatly woven but rather bulky basket of grasses and cat-tail leaves, swung usually from upright stalks of the cat-tail; lining of fine grass of uniform size. *Eggs* 4-7, usually 5, light blue, scrawled, blotched or clouded with dark purple or black, and chiefly about the larger end. Av. size, 1.04 x .72 (26.4 x 18.3).

General Range.—"Eastern United States and more southern British Provinces, except Florida and Gulf Coast; west to eastern base of Rocky Mountains; north to Nova Scotia, Province of Quebec, Ontario, Manitoba, etc." (Ridgway).[1]

Range in Ohio.—Common summer resident throughout the state wherever cat-tail swamps or their equivalent are to be found. Markedly decreasing in numbers because of the drainage of the swamps.

Photo by E. B. Williamson.

THE REDWING'S NEST.

IN speaking of Blackbirds three pictures almost invariably present themselves to the mind's eye. One is of a wet day in early March. The untidy land is surfeited with waters, partly from the tardy-melting snows, partly from the iterative dashes of rain which wreak their sullen spite alike on ghostly grove and sodden meadow. But the bird-man has seen a great company of Blackbirds trooping overhead, and settling in the first tree-top to northward; so he hastens after, mauger shower and slop. The birds are swarming in the upper branches, and giving rise to a perfect babel of noises. Clicks, clacks, whistles, squeaks, and ringing challenges make up the boisterous medley of those most sociable and garrulous of birds. It is a mixed company, for Grackles, "Rusties," and

1 "The Birds of North and Middle America," by Robert Ridgway, Part II, p. 332.

Cowbirds make common cause with Redwings in the northern migrations; but the last named preponderate, and it is they who are most vivacious, most resplendent, and most nearly musical. The Redwing's mellow *kongqueree* or occasional tipsy *whoop-er-way-up* is the life of the party.

Almost before we know it, our friends, to the number of a dozen pairs or more, have taken up their residence in a cat-tail swamp—nowhere else, if you please, unless driven to it—and here in early May a dozen baskets of matchless weave are swung or lodged midway of the growing plants. Your distant approach is commented upon from the tops of bordering willows by *keyrings* and other notes. At close range the lordly male, he of the brilliant epaulets and proper military swagger, shakes out his fine clothes and says *Kongqueree,* in a voice in which anxiety is quite outweighed by vanity and proffered good fellowship withal. But if you push roughly through the outlying sedges, anxiety obtains the mastery. The alarm is sounded. There is a hubbub in the marsh. Bustling, frowsy females appear, and scold you roundly. The lazy gallants are all fathers now, and they join direful threats to courteous expostulations, as they flutter wildly around the intruder's head. To the mischevious boy the chance frequently to call out these frantic attentions is irresistible, even when no harm is intended.

The third picture is of a cloud of Blackbirds—plain Blackbirds now, male, female, or young, it matters not—bearing down relentlessly upon a field of ripening corn. The terror of the black scourge belonged chiefly to a former day. Besides we will not dilate upon the weaknesses of our friends.

I have said that the Redwing prefers cat-tails for nesting; but in the vicinity of the larger swamps, or wherever there is danger of high water, they take readily to bushes or even small trees. Second broods, too, are more apt to be reared in elevated situations.

The local attachment of Redwings is quite marked, and indeed sometimes almost pathetic. I once visited the region of a famous swamp, the "Goose Pond," in Pickaway County, only to find that the misdirected energies of the local Hans had drained off the water some two years before, leaving the "ancient bottom of unfathomable ooze" as dry as tinder. Of course the drainage of the swamp had involved the total destruction of its charasteristic vegetation. Nevertheless a few pairs of Redwings lingered about the scene of their former happiness—their birthplace, no doubt, but now a dessicated waste —quite unable to grasp the meaning of the changed conditions.

No. 8.

THICK-BILLED REDWING.

A. O. U. No. 498d. **Agelaius phœniceus fortis** Ridgw.

Synonym.—NORTHERN REDWING.

Description.—"Similar to *A. p. phoeniceus* (preceding species), but decidedly larger and with the bill usually relatively much shorter and thicker" (Ridgw.). Adult female averaging paler than *A. phoeniceus.* Adult male, length, av. 8.79 (223.1); wing 4.96 (126.); tail 3.86 (98.); culmen .92 (23.3); depth of bill at base .53 (13.5). Adult female, av. length 7.33 (186.2); wing 4.15 (105.5); tail 3.08 (78.1); culmen .75 (19.1); depth of bill at base .46 (11.8).

Nest and Eggs.—Not distinguishable from those of *A. phoeniceus.* Does not breed in Ohio.

General Range.—"Central North America, breeding northward; in migrations from Manitoba south to Illinois, Indian Territory, and Western Texas, westward to and including the Rocky Mountains, and south to Arizona and Chihuahua" (A. O. U.). Also east at least to Ohio, Kentucky (Mason county), etc.

Range in Ohio.—Probably not uncommon during migrations in early spring and late fall. Sparingly resident in winter in south-middle and southern portions of state.

A singularly large and handsome male seen a few miles west of Columbus, while in company with Professor Lynds Jones, on December First last, aroused me to the probable presence of winter stragglers of Mr. Ridgway's newly elaborated subspecies, *A. p. fortis.* A careful examination of several of the large collections affords material which supports the conclusion indifferently well; but fuller study is necessary to prove that the larger-billed variety is habitually present in winter, or to determine whether all the winter specimens of Redwing belong to this form. It seemed to me also last spring that certain differences of voice and note obtain between the local and migrant birds,—the *kongkeree* call of the latter being hoarser and less finished, and their *clack* note of scolding both stronger and more husky. But one cannot afford to be dogmatic on such points just at present.

No. 9.

MEADOWLARK.

A. O. U. No. 501. **Sturnella magna** (Linn.).

Synonyms.—FIELD LARK; MEDLARK; MUDLARK (corruption); MEDLAR (poetical).

Description.—*Male*: General color of upper parts brownish black modified by tawny and buffish gray edgings of the feathers, the latter heaviest on secondaries and upper tail-feathers, where it takes the form of partial bands; cheeks, median, and superciliary lines sordid white; a large crescent on upper breast black; chin, upper throat, breast, middle belly, and line over eye bright yellow; sides and crissum black-streaked on a white or flaxen ground; bill singularly variegated, tawny, black, and white. *Female*: Like male but smaller and paler. The plumage of both sexes is duller in fall and winter, the normal colors being restrained by a profuse buffy overlay. Adult male, length 10.00-11.00 (254.-279.4); av. of four Columbus males, wing 4.66 (118.4); tail 3.10 (78.7); bill 1.26 (32.).

Recognition Marks.—Robin size; yellow with black or blackish collar, below; general streaky appearance above.

Nest, a thin bed of dried grasses on the ground, usually covered or overarched by growing grass. *Eggs,* 4-6, white, speckled and spotted with cinnamon-brown or purplish. Av. size, 1.12 x .80 (28.5 x 20.3).

General Range.—Eastern United States and southern Canada to the Plains. Breeds from the Gulf of Mexico northward.

Range in Ohio.—Wheaton's words, penned twenty-five years ago, are still apt: "Abundant. Summer resident in northern, in part resident in middle, and resident, but less numerous in winter, in southern Ohio."

Taken at McConnelsville. *Photo by the Author.*

A PART OF MEADOWLARK'S DOMAIN.

LAND is, by courtesy, said to belong to this person or that because he happens to hold a parchment whereupon are inscribed certain characters, a deed in legal phrase; but if the earth belongs to those who use it, and if he is a benefactor who causes two blades of grass to grow where was only one before, then, surely, the Meadow Lark has clear title of eminent domain. Fortunately, however, the claims of the farmer and the Lark do not conflict. The Lark asks but shelter, and if the man wants crops, lo! here is his most faithful servitor.

It is difficult to overestimate the economic value of the Meadow Lark. The bird is by choice almost exclusively insectivorous. If, however, when hard pressed, he takes toll of the fallen wheat or clover seed, he is as easily justifiable as is the hired man who consumes the farmer's biscuits that he may have the strength to wield the hoe against the farmer's weeds. Being provided with a long and sensitive bill, the Meadow Lark not only gleans its insect prey from the surface of the ground, but works among the grass roots, and actually probes the earth in its search for wire- and cut-worms, those most dreaded pests. Besides devouring injurious grubs and insects of many kinds, the Lark has a great fondness for grasshoppers, subsisting almost entirely upon these in the season of their greatest abundance. In the matter of grasshopper consumption alone Meadow Larks of average distribution, are estimated by no less an authority than Professor Beal, to be worth about twenty-four dollars per month, per township, in saving the hay crop. To the individual farmer this may seem a small matter, but in the aggregate the saving to the nation amounts to some hundreds of thousands of dollars each year.

Even in winter, when a few individuals or occasional companies of Larks are still to be found, a large proportion of their food consists of hardy beetles and other insects, while weed-seed and scattering grain is laid under tribute, as it were, reluctantly. While not strictly resident to a large extent, the Meadow Lark is likely to occur almost anywhere in winter, and it arrives so early in February and March as to cause frequent confusion with the strict winter residents. Numbers of them also pass through our borders into Ontario. A certain raw day in early spring—March 18, 1889, it was—appeared remarkable for the number of Meadow Larks that were piled up on the Lake Erie shore; not dead, nor literally heaped up, indeed, but gathered thickly in the bordering meadows and bluff pasture lands because of the aspect of the Lake, which was so forbidding that the birds feared to cross it. In a walk of four or five miles, not tens nor hundreds, but thousands were seen, and they made a mighty and incessant chorus throughout the distance. Every now and then a bunch of forty or fifty birds would charge out over the lake, but always reconsidered the motion and beat back hastily to shore; and we saw none actually setting out upon the final passage.

Photo by Rev. W. F. Henninger.

NEST AND EGGS OF MEADOWLARK.

The Meadow Lark's nest is the treasure trove of every farm boy. Eggs may be looked for the first week in May, or earlier as one proceeds south. The female is a close sitter, sometimes allowing approach within a foot or two before flushing. Oftener, however, she leaves the nest at the approach of danger and sneaks away with consummate skill, until she chooses to discover herself at a distance sufficient to mislead. The nests are well hidden in the deeper grass of meadows and pastures, and are frequently overarched with dried grasses, not so much for the purpose of protection against the weather, as has been suggested, but as a further aid to concealment.

According to Dr. Jones, a favorite way to locate the Meadow Lark's nest is to pass right by the anxious male as he stands on some post twitching his tail nervously and shouting signal calls to his sitting mate. When he thinks the danger past he will, as likely as not, fly straight to the hidden nest, chuckling with self-approbation and eager to tell Mrs. Magna all about it.

Besides the familiar whistling song of three or four notes, Meadow Lark occasionally indulges a perfect whirlwind of bubbling notes, interspersed with whistled "whews,"delivered while sailing down on stiffened wing, or fluttering about in an excited circle, always, we may be sure, for the benefit of his enamorata. He is also much given to a sort of rubbing, rattling cry, very expressive, but very hard to reproduce or describe. This is the language of ordinary Sturnelline intercourse. With it he sputters his indignation at an intruding stranger, or congratulates himself upon having sucessfully outwitted a passing hawk. In this dialect too he pours forth a flood of blarney and sweet talk during a tete-a-tete with some gracious female.

Meadow Lark has an impressive note of apprehension and strong emotion, *zweet,* delivered in a half-crouching posture. Again he boasts another, even more startling, a note of alarm and eminent distrust, *turk,* or *turk, turk,*

delivered while the bird is walking about uneasily, and craning his neck to the utmost to command a view of the fancied danger, accompanying the sound by an emphatic flirt of wings and jerk of tail.

On a sultry July day as I sit by the open window overlooking a large, half-kept city park, I hear the shrill clarion call of a Meadow Lark. It comes to me softened by distance and refined by the gentle filtration of intervening leaves, but I know it for the same sound which thrilled my heart one early day last March. The sun had just leaped above the horizon, and his first rays were caught upon the glowing breast-plate of this high priest of morning, as he mounted a commanding post and blew a golden trumpet, piercing sweet. *"He-ar cheer"*, he said, and those who listened felt constrained to heed the summons, moving on with quickened step and clearing brow to face the duties of the coming day.

To me there is something little short of sacred in the message of this lowly bird. No fitter symbol can we find of soul triumphant over matter. He lives in the mud, indeed, but he does not grovel there. Sordid cares cannot bind the winged spirit. He quits the ground. He lifts his voice, and lo! he claims a kinship with the Sun, the Morning and the Heart of all. And shall not all the sons of cheer confess the claim?

No. 10.

ORCHARD ORIOLE.

A. O. U. No. 506. **Icterus spurius** (Linn.).

Description.—*Adult male*: Black and chestnut; head and neck all around, throat, upper back and scapulars glossy black; lesser wing coverts, lower back, and remaining under parts rich chestnut; wings and tail dull black, the feathers of the former edged, and of the latter sometimes tipped, with whitish; bill, slender, slightly curved, black. *Adult female*: Above, dull olive-green, brighter and more yellow on head, rump, and tail, dullest on back; below sordid yellow; wings fuscous, the greater and middle coverts with whitish edging. *Young males*: First year, like females but larger; second year, like females save for a black throat-patch. Older birds show irregular traces of chestnut, and the full plumage is assumed the third season. Length about 7.00 (177.8); wing 3.16 (80.3); tail 3.06 (77.7); bill .63 (16.). Females smaller.

Recognition Marks.—Sparrow size; black and chestnut coloring of adult male; black throat-patch on olive-yellow ground of young male of second year; female and young obscure.

Nest, semi-pensile, or supported more or less from below, not so deep as Baltimore's; a marvelous tissue of interwoven grasses placed in an upright fork ten or fifteen feet up, and usually in an orchard tree or willow. *Eggs,* 3-5, bluish white with specks, spots, and scrawls of brown or sepia, and deep-seated shell marks of a purplish cast. Av. size, .80 x .57 (20.5 x 14.5).

General Range.—Eastern United States north to about Lat. 44° and west to Great Plains; south in winter to Panama. Breeds throughout its range.

Range in Ohio.—Summer resident, generally but sparingly distributed.

CHESTNUT and black make a rich and tasty costume for a bird, altho they render the owner somewhat less conspicuous than is the brilliant Bird of Baltimore. The Orchard Oriole is a familiar resident of orchards, shaded fence-rows, and the wooded banks of streams. His familiarity is delightful, since he improves upon acquaintance; and it is gratifying to note everywhere an increase in numbers, especially southerly.

As a summer boarder none could be more welcome, for in addition to his sprightly ways and pleasing song, his industry in the pursuit of insect pests is indefatigable, and his presence in orchard and garden above reproach. In common with his golden cousin this bird feasts upon the noxious click beetles which scarcely any other bird will touch; and none render more valiant service than he in holding the notorious tent caterpillars and their ilk in check.

Photo by the Author.

NEST OF ORCHARD ORIOLE FROM ABOVE.
THE NEST IS REALLY DEEPER THAN IT APPEARS TO BE, SINCE WE SEE NOT EGGS BUT THE HEADS OF YOUNG BIRDS.

The song of the Orchard Oriole is rapid, tumultuous, exultant, the irrepressible outburst of an energetic nature. It lacks the mellow richness of Baltimore's, but has instead a delicious piquancy, a subtle, keen-edged tang like that of Catawba grapes. Interspersed with the music come phrases of vivacious chatter, from which the speaker leaps again to song.

Even males of the second year, who have to content themselves with black neck-ties and suits of modest green, are

not a whit behind adults in musical attainments. Indeed, I have sometimes fancied that the handicap of juvenile garb serves only to provoke superlative efforts in song on the part of the youthful aspirant. Certain it is that the two-year-old birds are often happily mated, and their music-loving wives are not always won from the ranks of those whom we should think "ower young to marry yet."

The nest of the Orchard Oriole is a beautiful and ingenious creation. Green grass blades of the tougher sorts are twisted and wrapped and interwoven with the skill of a lace-maker, until a pouch some three inches wide by four inches deep is formed. This is made fast by the brim to the spreading forks near the tip of some horizontal apple-limb, somewhat after the fashion of the Vireo's; or else, and more commonly, it is slung between two or three spreading, upright forks. In the latter case it is tightly lashed, for its entire depth, to two or more of the ascending branches, thus more closely assimilating certain types of Redwings' nests. Wilson states that when the descending branches of the weeping willow are chosen, the nest is made deeper and less rigid so as to allow for greater freedom of movement in the wind. The same observer once examined a grass-strand taken from the Orchard's nest, and found that in its thirteen inches of length it had been hooked through and returned some thirty-four times.

When first constructed, of bright green grass, this Oriole's nest is at the acme of invisibility, but as the season advances the color bleaches out, so that the young find themselves in a straw-colored cradle, which not infrequently invites rather than forbids attention. In our latitudes soft materials such as wool, plant-down, feathers, or even horse-hair, are used for lining; but further south the nest is said to be usually quite unlined.

No. 11.

BALTIMORE ORIOLE.

A. O. U. No. 507. **Icterus galbula** (Linn.).

Synonyms.—FIREBIRD; HANGBIRD; HANGNEST; GOLDEN ROBIN.

Description.—*Adult male*: Black and orange; head and neck all around, a "tongue" on the lower throat, upper back, and scapulars, wings (except lesser and greater coverts), and greater part of tail above, black,—warm and glossy anteriorly, duller on wings and tail; tips of greater wing-coverts, and edging of quills and secondaries white; the remaining plumage orange. The orange varies in intensity from the paler plumage of the young males to the rich orange-red of the oldest birds. *Female*: General color orange-olive, clearest below and

on rump; on head, throat, and back indistinctly spotted or streaked and clouded with black; wings fuscous; two dingy white wing-bars formed by middle coverts and ends of greater coverts. *Young*: Like female, the males gradually acquiring the adult orange. Length 7.50-8.00 (190.5-203.2); av. of five Columbus males: wing 3.70 (94.); tail 2.94 (74.7); bill .71 (18.).

Recognition Marks.—Chewink size; orange and black coloration. The females, though obscure, is enough like male to be readily distinguished.

Nest, purse-shaped and pensile, being oftenest swung from the very tips of drooping branches; a closely-woven fabric of grass, plant fibers, string, etc. The lining proper is of the softest materials,—cotton, etc. *Eggs,* 3-6, rather elongated, white (greenish or dull), elaborately scrawled and streaked with dark browns or purple. Subdued shell-marking in spots or blotches is also usually present. Av. size, .95 x .63 (24.1 x 16.).

General Range.—Eastern United States, north to Ontario and Manitoba, west nearly to Rocky Mountains; south in winter through Mexico to Colombia.

Range in Ohio.—Common summer resident.

THE warm breath of spring has soothed the violet's last fears, and the orchard trees are crowded with blossoms. Then comes one day warmer than all the rest, when the spice-laden air pulsates with heat, and the heart with expectancy. Suddenly from off some blushing snow-bank of apple-blossoms comes a jubilant whistle.

"Hush! 'tis he!
My Oriole, my glance of summer fire,
Is come at last."

A gorgeous male—one of the largest and the oldest, and therefore with colors the most intense you will see that season—is helping himself eagerly to the swarming tidbits which infest the flowers, but he stops every moment or so to flute his excited greetings to the joyous villagers in the dear home town. The news spreads rapidly, "The Orioles have come." That beautiful fleet which silently stole away from our shores last autumn, and went we knew not whither, laden with its precious freight of song and memory, that winged, fiery fleet, has come to port again, and brought our own with usury of flame, and song, and unpent joy. Now spring is spring again!

The Baltimore Oriole is rather partial to the haunts of men, being most frequently found along shady village streets, or in front-yard elms and orchards of country seats, but in many portions of the state they are so abundant as to be forced to hold to the edges of forests and the varied umbrage of river bottoms. The males arrive in spring a week or ten days earlier than the females, and during this period are restless and active. Their song too at this time, as Dr. Brewer notes, is loud and shrill as well as fragmentary. Upon the arrival of the females, the tender passion mellows the voices and improves the manners of the expectant suitors. During the mating season the rich full notes

of the Oriole are among the most entrancing sounds which haunt our childhood and maintain the freshness of advancing years. The female, too, is something of a singer, and she whistles and chatters or answers her lord with cheerful contentment as she moves about her task.

The task which the Oriole sets herself in building her nest is one of the most exacting in nature, and its fulfilment the most wonderful. Before the advent of civilization she had to rely entirely upon vegetable fibers, especially the inner bark of hemp, but now her preference is for string, silk, rags, and ravelings. It is *her* preference, by the way, for she does the work, while her chosen lord attends her flight, sings snatches of song, or offers gratuitous and unheeded advice. So the poet is slightly in error when he says,

> "My Oriole
> Is come at last, and, ever on the watch,
> Twitches the pack-thread I had lightly wound
> Around the bough to help *his* house keeping,—
> Twitches and scouts by turns, blessing his luck,
> Yet fearing me, who laid it in his way."

But Lowell's lines are so expressive that we readily excuse the oversight and eagerly call for more.

> "Heave ho! Heave ho! he whistles as the twine
> Slackens its hold. Once more now! and a flash
> Lightens across the sunlight to the elm
> Where his mate dangles at her cup of felt."

From the slender tips of some branch, be it drooping, as of elm or willow, or ascending, as of maple or apple, she suspends a closely-woven pouch, which yields to every impulse of the wind, but wins by yielding. By seven inches or more her eggs are removed from alien beak and talon.

Tired of the confinement of the nest, the ambitious fledglings clamber up the sides and perch upon the brim. From this less secure position they are not infrequently dislodged before they are quite ready to face the world. The following incident, which came under my notice some years ago, concerns a young Bullock's Oriole, a closely allied species. A friend of mine secured a fledgling Oriole, by rescuing it from the water where it had evidently just fallen from an overhanging nest. When taken home it proved a ready pet, and was given the freedom of the place. Some two weeks later my friend secured another nestling Oriole from a different brood and put it in the cage with the older bird. The newcomer had not yet learned to feed himself, but only opened his mouth and called with childish insistence. Judge of the owner's delight, and mine as a witness, when the older bird, himself but a fledgling, began to feed the orphan, with all the tender solicitude of a parent. It was irresistibly

cunning and heartsome too, for the bird to select with thoughtful brotherly kindness, a morsel of food, and hop over toward the clamoring stranger and drop it in his mouth; after this to stand back as if to say, "There, baby! how did you like that?" This trait was not shown by a chance exhibition alone but became a regular habit, which was still followed when the older bird had attained to fly-catching. It upset all one's notions about instinct, and made one think of a Golden Rule for birds.

No. 12.

RUSTY BLACKBIRD.

A. O. U. No. 509. **Scolecophagus carolinus** (Mull.).

Synonyms.—Rusty Grackle; Thrush Blackbird.

Description.—*Adult male in breeding plumage*: Uniform glossy black, with bluish green reflections; iris pale straw. At other seasons the plumage bears rufous or "rusty" tips above, especially anteriorly, and rufescent or buffy tips below, in varying proportions; a light line also over the eye. The full nuptial dress is seldom seen in Ohio, but may be found by narrowly observing the latest migrants in spring. *Adult female in breeding plumage*: Blackish slate, lustrous above, duller below. At other seasons the general cast of plumage is lighter, and the overlay of rusty or buffy is similar to that of the male. Adult male, length 9.00-9.60 (228.6-243.8); wing 4.49 (114.); tail 3.68 (93.5); bill .76 (19.3). Female smaller.

Recognition Marks.—Robin size; plumage usually rusty-tinged during migrations in Ohio. If in full plumage they are the only pure black birds of the size. In the common flocks of "blackbirds" in early spring, the high whistling notes belong to the Rusties.

Nesting.—Does not breed in Ohio. *Nest,* of sticks and coarse grasses held together with mud, lined with fine grasses and rootlets, placed in bushes or high in coniferous trees. *Eggs,* 4-7, grayish or pale green, speckled and mottled with purples or reddish browns, and without streaks or lines. Av. size, 1.00 x .76 (25.4 x 19.3).

General Range.—Eastern and northern North America, west to Alaska and the Plains. Breeds from northern United States northward. Winters from Kentucky and Tennessee southward.

Range in Ohio.—Abundant spring and fall migrant. Winters sparingly in southern portion.

THE great roving hordes of "Blackbirds" in early spring are likely to contain at least a sprinkling of "Rusties," but usually they are not so eager to press on as are the impulsive Redwings, and so they fall out of the ranks by dozens and scores. Succeeding platoons composed of these birds alone keep arriving

from the south during the last weeks in March and the first in April, while many do not depart for their summer home in the far north till the first or even second week in May.

Rusty Blackbirds are to be found chiefly in damp woods and along streams. While with us they are rather retiring, partly because they are pilgrims—and it behooves all such to be modest—and partly because they undergo the spring moult *en route*. The last trace of rusty edging must be removed from the feathers before the breeding ground is reached, tho such as have attained the full dignity of dress suits may declare their hearts to the ladies before they quit Ohio.

In some tiny glade in the heart of the budding forest it is that one comes upon a company of these sojourners, feeding perhaps upon the ground. They walk about with easy grace or shift by little flights, males and females flocking together, and all engaged in a subued but voluble chatter. An instant hush follows the signal of alarm and the flock rises silently to the neighboring treetops or passes to a distant spot, where their conversation is gradually resumed. As the alarm decreases the birds come gradually dropping down, one by one, until confidence is completely restored again.

The notes of the Rusty Blackbird consist of a bubbling medley of l's and r's through which clear, high-pitched whistles or squeaks are interspersed at will. *Gorwhillier* conveys some idea of the liquid quality of the former, and expresses also in part the effort which is required to produce them. The effect of a full chorus is really quite pleasing. If not "music" it is at least among the less disagreeable of noises.

No. 13.

BRONZED GRACKLE.

A. O. U. No. 511b. **Quiscalus quiscula æneus** (Ridgw.).

Synonyms.—Crow Blackbird.

Description.—*Adult male*: Lustrous black, exhibiting strongly three sorts of iridescence; on the head, hind-neck and breast purple, peacock blue, or greenish; on the remaining under parts and back brassy; on the wings and tail a curious combination of the two resulting in a shimmering violet- or purplish-black. *Female,* somewhat similar, but a warm brown rather than black; subdued iridescence shown chiefly on head and breast. Length 12.00-13.50 (304.8-342.9); av. of five Columbus males: wing 5.62 (142.8); tail 5.48 (139.2); bill 1.15 (29.2). Female smaller.

Recognition Marks.—Little Hawk size; glossy black or brown plumage; tail long and rounded.

Nest, a bulky but compact structure of sticks and stalks, plastered inside with mud, and lined with fine grasses; placed fifteen to thirty feet high in evergreen trees or in the orchard. *Eggs,* 4-6, sometimes 7, light blue or greenish blue, irregularly spotted, blotched, or "pen-marked" in zigzags and flourishes with purple or sepia. Av. size, 1.20 x .82 (30.5 x 20.8).

General Range.—Eastern United States from the Allegheny Mountains west to the Rocky Mountains, north from southern New England to Newfoundland and Great Slave Lake. In migrations it invades the southeastern states, except Florida and the Atlantic sea coast south of Virginia.

Range in Ohio.—A commonly distributed summer resident. Stragglers and occasional small companies winter in the state.

AESOP tells of a Crow which, appropriating some cast-off feathers of a Peacock, succeeded in cutting quite a swath among his plain-hued friends, until a clever rival disclosed the sham and brought him into deserved contempt. The Crow Blackbird has improved upon the trick. Without trying to parade feathers manifestly too big for him, he has borrowed the Peacock's sheen, and he struts about, in a manner accommodated to his surroundings, with all the Peacock's pride. He *is* a handsome fellow. See him as in the full sunlight he submits a wing to the critical gaze of his coveted Juliet! Burnished brass, brass over steel, resplendent as a coat of mail! She approves, altho she will not say so. But, La! how insolent he is! She likes that too and snickers softly as he shouts down to you, *"Jup, jup*—What are you doing here in my orchard?" If one is taken unawares he is apt to stammer out, "Why-why, I thought it was my orchard until you spoke."

For all he is so vain, no one ever accused the Grackle of being graceful. He is capable of bold, vigorous flight, but in the spring he chooses to exhibit the dimensions of his rudder-like tail, and sometimes he lets it swing him around in a small circle as though it were a weight from which he was strug-

BRONZED GRACKLE

gling to get free! His love-making antics, too, are all the more ridiculous for being earnest. Perched upon the tip-top of an evergreen tree he thrusts his wings out, spreads his tail, ruffles all his feathers, and then throws his head forward like a person about to obtain relief from seasickness. The outcome of all this effort is a sound by no means ravishing, *flee-e-k-starr,* or simply *fwe-e-e-t.* When the female has been sufficiently impressed by the accomplishments of this vocal contortionist the pair converse in *jups* of much modified insolence, and in a series of prolonged squeaks of unquestionable affection.

Photo by the Author.

AN EARLY NEST.

"THEY ARE PLACED WITHOUT MUCH REGARD TO CONCEALMENT, AT FIRST.

The tops of evergreen trees have long been favorite nesting places for the Bronzed Grackles, but, in the comparative scarcity of these, apple trees are second choice. While not strictly gregarious during nesting season, the birds often occupy neighboring trees, and a good sized orchard may contain twenty or thirty nests. They are placed without much regard to concealment, at first, since the nesting is often under way by the 20th of April, but the advancing season is more lavish of its foliage. The nest is quite a bulky affair of dried-weed stalks and grasses, with a deep cup-shaped matrix of mud and a bountiful lining of grasses and horsehair. As to manner of attachment it combines all known characters, being saddled and settled, as well as anchored by the edges or half swung. The eggs are quaintly spotted and stained or scrawled with umber and purplish black on a dull green or vitreous blue ground.

During the nesting season the Crow Blackbird betrays its affinity with the Crows and Jays by helping itself occasionally to the eggs and young

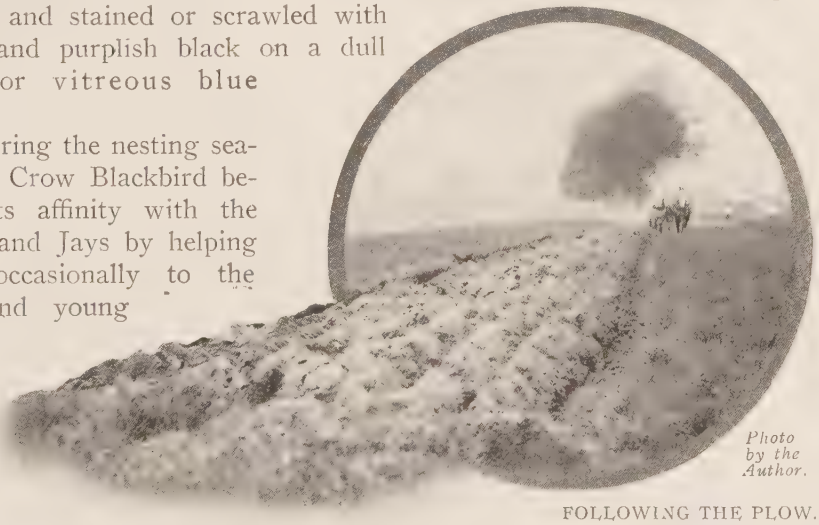

Photo by the Author.

FOLLOWING THE PLOW.

BRONZED GRACKLES ARE FEEDING UPON THE GRUBS UPTURNED WITH THE LAST FURROW.

of other birds. Altho the fault is a grave one, a special investigator[1] does not find that such food bears any sensible proportion to the total amount and concludes that the offense is too infrequent to require discipline at our hands. More serious from an economic standpoint is the charge that these birds consume quantities of grain, especially corn. Altho the mischief is offset by the consumption of an equal amount of insects, and those largely of injurious sorts, it becomes at times unquestionably necessary for the farmer to discourage the depredations of this bird when the corn is in the milk.

Before the breeding season is over the males begin to gather in some favorite "roost" to spend the night, and these companies form the nucleus of large flocks, which are augmented by the arrival of females and young as rapidly as the latter are sufficiently matured. One of these "roosts" comes to include the Grackle population for miles around, and often numbers thousands. If quarters are taken up in a village grove or city park, as is not infrequently the case, the noisy congregation affords occasion for comment and conjecture on the part of hundreds of citizens. Lynds Jones[2] has prepared a very interesting account of such a roost which has for years occupied a position on the college campus at Oberlin. Similar roosts have become recognized institutions at Elyria, Granville, McConnelsville, and a score of other places already reported. Indeed it seems probable that nearly every county will be found to contain in late summer and early fall several divisions, with corresponding camps, of this great Grackle army.

1 M. F. E. L. Beal. "The Crow Blackbirds and their Food." Year Book United States Department of Agriculture, 1894.

2 "The Oberlin Grackle Roost." Bulletin No. 15 of the Wilson Ornithological Chapter, July 30, 1897.

No. 14.

EVENING GROSBEAK.

A. O. U. No. 514. **Hesperiphona vespertina** (Coop.).

Description.—*Adult male*: Forehead clear yellow; crown black; remaining fore-parts sooty-olive, shading insensibly through the dull yellow of lower back and belly into clear yellow of under tail-coverts; wings and tail black; a large white blotch formed by ends of inner secondaries and their coverts. *Adult female*: "with prevailing color ashy or only slightly brownish-gray" (Ridgw.). A small, clear white patch at base of inner primaries; white blotches on tips of upper tail-coverts and inner webs of tail-feathers, in varying proportions. Bill, in both sexes, massive, yellow. Length about 8.00 (203.2); wing 4.40 (111.8); tail 3.42 (86.9); bill along culmen .75 (19.1); depth of bill .56-.65 (14.2-16.5). No appreciable difference in size between the sexes.

Recognition Marks.—Chewink size; large, conical bill; olive-brown coloration with black and white in masses.

Nesting.—Does not breed in Ohio. *Nest* principally composed of fine rootlets with some Usnea moss and a few sticks, settled upon horizontal branch of pine or fir, near tip, and at considerable heights. *Eggs*, 4, "in color, size, form, texture and markings indistinguishable from those of the Red-winged Blackbird" (Birtwell).

General Range.—"Interior of British America, southward in winter to the upper Mississippi Valley and basin of the Great Lakes" (Ridgway). Of sporadic occurrence in New England.

Range in Ohio.—Of rare and casual occurrence in winter only.

FEW birds have so thoroughly piqued the curiosity of the man of science or have so long resisted his insistent inquisitiveness as has this big-billed, uncanny bird of the mountains. His comings and goings know little law and his geographical route is not yet clearly defined. A screaming company of them may graciously pitch camp in John Smith's orchard in, say, Wisconsin, and they may spend the winter there if Mr. Smith lets them; but the diary of many an ambitious explorer in the north and west fails to contain the coveted record of his appearance.

It remained for Mr. Francis J. Birtwell, in the summer of 1901, to discover the nests of this long-sought bird. This singularly gifted and promising young ornithologist was spending a honeymoon with his bride, in the mountains of New Mexico. He was scarcely over the first elation of success at discovering a colony of breeding Grosbeaks when he lost his life in an attempt to reach a nest placed sixty-five feet high in a giant pine.

The Evening Grosbeak is seen only in winter or early spring at the lower latitudes and altitudes. The birds are strictly gregarious at this season and spend their time closely and rather stupidly feeding upon fallen maple and ash

seeds, or, later in the season, upon the swelling buds of the trees themselves. A flock which I observed one winter in Seattle, Washington, spent two months strictly within the confines of the university campus. In feeding they would drop to the ground one by one, somewhat after the fashion of English Sparrows, but they permitted a rather close approach and seemed quite unacquainted with the treacherous ways of men. During the meal the cracking of refractory maple keys was varied by frequent shrill whistles, or short shrieks, of startling intensity. In the breeding season the male is said to have a clear whistling song not unlike a Robin's, but he stops suddenly midway, as though he were out of breath. It is certain also that the song is not delivered exclusively or even preferably in the evening, as was at first supposed. Hence it appears that the name "Evening" has no appropriateness whatever; but it will doubtless be preserved, if only to point a moral.

This bird is admitted to our avifauna solely on the evidence of Dr. Kirtland who met with it at Cleveland during March, 1860. A great wave of them swept over the farther East in the winter of '89-90, but so far as I am aware none were recorded from Ohio at that time.

No. 15.

PINE GROSBEAK.

A. O. U. No. 515. **Pinicola enucleator leucura** (Muller).

Description.—*Adult male*: Slaty gray, with an overlay of carmine or dull rosy, except on belly, wings, and tail; the rosy color is clearest on head and adjacent parts and on the rump; wings and tail fuscous with faint rosy or whitish edgings; indistinct wing-bars are formed by the white or rosy tips of middle and greater coverts and by the edgings of inner secondaries. *Adult female*: Ground color like male; crown, nape, and upper tail-coverts saffron or olive-yellow; this color also tinges the cheeks, back, fore-breast and rump in varying proportions, and everywhere supplants the rosy of the male save in the oldest (?) birds. Adult male, length 8.25-9.00 (209.6-228.6); wing 4.60 (116.8); tail 3.63 (92.2); bill along culmen .53 (13.5); depth of bill .48 (12.2). Female somewhat smaller.

Recognition Marks.—Chewink size (only as long as Chewink but stockier; nearer Robin size); stout bill; rosy, or saffron, and gray coloring.

Nesting.—Does not breed in Ohio. "*Nest*, composed of a basement of twigs and rootlets, within which is a more compact fabric of finer materials. *Eggs*, usually 4, pale greenish blue, spotted and blotched with dark brown surface markings and lilac shell-spots." Av. size, 1.05 x .74 (26.7 x 18.8).

General Range.—Northeastern and central-northern North America, breeding from northern New England northward nearly to the limit of trees; south in winter irregularly into the upper tier of the eastern states,—New England, Wisconsin, etc.

Range in Ohio.—A rare winter visitor.

ANOTHER of our rarer winter birds, whose occasional visits serve only to stimulate a desire on our part for a closer acquaintance, is the Pine Grosbeak, It is almost exclusively a bird of the deep pine forests, so it is not to be wondered at that it so seldom ventures into our state. While found more commonly in Pennsylvania and regularly in New England, it breeds only from the northern portions of the latter region northward. Like many another woodland recluse the Pine Grosbeak often appears dazed when it encounters civilization and may not infrequently be taken with butterfly nets or even with the hand. It is on record that the markets of Boston were abundantly supplied one winter with these birds. It was, of course, in the early days (1835), when the Puritan stomach was less influenced by sentimental considerations. Or it was perhaps before a higher use had been found for them, namely, to decorate ladies' bonnets.

Altho such a timid recluse, with little of the *savoir faire* of the world, the Pine Grosbeak is a born poet and dispenses sweetest music to his neighbors in the Laurentian wilds. The song is described as "clear, sweet and flowing, like that of the Purple Finch," but stronger, of course, as becomes the larger size.

The food habits of this species are as yet imperfectly known. They are known at least to eat small fruit of all sorts with avidity, and specimens obtained in the far Northwest were found to have fared exclusively upon poplar buds. When with us mountain ash trees are sure to be visited, and cedar berries, when obtainable, are very welcome.

It is noteworthy also that the southward moving flocks of winter are composed almost exclusively of young males and sombre-colored females, while the older males remain for the most part in their northern homes.

No. 16.

PURPLE FINCH.

A. O. U. No. 517. **Carpodacus purpureus** (Gmel.).

Description.—*Adult male*: Dull crimson, or deep rosy red, with a slight purplish tinge, brightest on front, breast, and rump, whitening below; wings and tail fuscous with rosy edgings. Area of rosy suffusion reduced in fall and winter specimens. *Female* quite different; ground color, gray or flaxen, everywhere spotted and streaked with olive-brown (the color-bearing feathers are really dusky and heavily edged with olive), in sharply defined streaks and arrow-head marks below, above minutely streaked or nearly uniform; a space in lower throat and belly nearly clear; wings fuscous, edged with olive, not rosy. *Young* like female, but males pass through a bronzy stage. Length 6.00-6.25 (152.4-158.8); wing 3.21 (81.5); tail 2.23 (56.6); bill along culmen .45 (11.4); depth at base .34 (8:6). Females slightly smaller.

Recognition Marks.—Sparrow size; rosy coloration of male, olive streakiness of female. The female bears a superficial resemblance to the Pine Siskin, but the latter is a smaller and yellower bird, with a very much smaller bill.

Nest, composed of weed stalks, grasses, rootlets, etc., lined with soft substances and hair; placed at moderate heights in trees, preferably evergreens, and oftenest on horizontal boughs. *Eggs*, 4 or 5, dull green, spotted and speckled and streaked (or not) with dark brown, chiefly near larger end. Av. size, .85 x .65 (21.6 x 16.5).

General Range.—Eastern North America, from the Atlantic Coast to the Plains. Breeds from Middle States northward.

Range in Ohio.—Spring and fall migrant; of casual occurrence in winter. Formerly a few remained to breed in the northern portion.

HERE comes another band of jolly rovers who have seen sights in the Laurentian highlands, no doubt, or possibly in dismal Labrador, but who are quite content for the nonce to while away the time among the unrifled cones of the evergreen windbreak, or in making an early raid upon the ungarnered crop of rag-weed seed. The migrating instinct urges them southward with only indifferent success. They may be gone tomorrow or they may conclude to spend the winter with you. At any rate they are here now and that is reason enough for pleasant chatter and fragments of remembered song.

One observer would give "its very characteristic utterance" as "a short, rather dull-sounding note, scarcely metallic—the metal pressed the instant the bell is struck"; while another, more generous, or perhaps more enthusiastic, would give it credit for "a musical metallic *chink, chink.*"

Those birds which have not wintered with us straggle back through March and April, and linger sometimes into May. At this season they are oftener found in the heart of the woods along streams, feeding upon the buds of the slippery elm. A company of them may seem at a time very much devoted to the

task, but before long some restless young gallant will burst out with uncontrollable song—a carol delicate and sweet and free, and the whole flock will forget its sordid pursuits and fall to love-making. This has become the all-absorbing pastime by the time the birds quit us for the North, and we may suppose that all troths are plighted under our pleasant roof-tree.

Dr. T. M. Brewer has this to say more fully of the Finch's song: "The song of the Purple Finch resembles that of the Canary, and though less varied and powerful, is softer, sweeter and more touching and pleasing. The notes of this species may be heard from the last of May until late in December (in New England) and in the long summer evenings are often continued until after it is quite dark. Their song has all the beauty and pathos of the warbling Vireo and greatly resembles it, but is more powerful and full in tone. It is a very interesting sight to watch one of these little performers in the midst of his song. He appears perfectly absorbed in his work, his form dilates, his crest is erect, his throat expands and he seems to be utterly unconscious of all around him. But let an intruder of his own race appear within a few feet of the singer and the song instantly ceases, and in a violent fit of indignation he chases him away."

Concerning the reputed nesting of this species in the northeastern counties of the state I have no exact information. The birds prefer evergreen trees for nesting sites, but will put up with orchard trees on occasion. The nests are flatter than is usual with tree nesting sparrows, and are usually well concealed by the foliage. Dr. Howard Jones, who was familiar with the Purple Finch in New York State, writes: "A nest before me, a fair representative of the species, is composed of a foundation and superstructure of brown roots, the coarsest being in the foundation; many of these are one-sixteenth of an inch in diameter by six or eight inches in length. They are arranged circularly and form a ragged looking exterior, about five inches in diameter outside of the loosest rootlets. Within the superstructure is a beautifully wrought lining, with walls about three-eights of an inch thick, of the very finest light brown rootlets. These are so curly and curved, and interlaced and twisted together at the rim, that the inner nest suggests a piece of silver filigree work. The diameter of the cavity is about two inches; the depth, one inch."

No. 17.

ENGLISH SPARROW.

INTRODUCED. **Passer domesticus** (Linn.).

Synonyms.—HOUSE SPARROW; DOMESTIC SPARROW; HOODLUM.

Description.—*Adult male*: Above ashy gray; middle of back and scapulars heavily streaked with black and bay; tail dusky; a chestnut patch behind eye spreading on shoulders; lesser wing-coverts chestnut; middle coverts bordered with white, forming a conspicuous white bar during flight; remainder of wing dusky with bay edging; below ashy gray or dirty white; a black throat-patch continuous with lores and fore-breast; bill and feet horn color. *Adult female*: Brownish rather than gray above; bay edging lighter; no chestnut, unmarked below. Length 5.50-6.25 (139.7-158.8); wing 3.00 (76.2); tail 2.20 (55.9); bill .50 (12.7). Sexes of about equal size.

Recognition Marks.—"Sparrow size"; black throat and breast of male; female obscure brownish and gray.

Nest, a globular mass of grass, weeds and trash, heavily lined with feathers, placed in tree and with entrance in side; or else heavily lined cavity anywhere. Holes in apple trees and crannies in shale banks are favorite places. *Eggs,* 4-7, whitish, heavily dotted and speckled with olive-brown or dull black. The markings often gather about the larger end; sometimes they entirely obscure the ground color. Av. size, .86 x .62 (21.8 x 15.8).

General Range.—"Nearly the whole of Europe, but replaced in Italy by *P. italiae,* extending eastward to Persia and Central Asia, India, and Ceylon" (Sharpe). "Introduced and naturalized in America, Australia, New Zealand, etc." (Chapman).

Range in Ohio.—"The first importation of this pest into the state directly from Europe was into Cleveland in 1869, twenty pairs. During the same year thirty-three pairs were taken from New York to Cincinnati and Warren. Then followed importations into Marietta, 1870; Coshocton and Portsmouth, 1874; Steubenville about 1880 or 1881; Wapakoneta about 1882, which seems to have been the last importation. Since that time it has spread well over the state, in the more settled districts even invading the country places and farm buildings, until the tendency to nest in the woods grows strong" (Jones).

WITHOUT question the most deplorable event in the history of American ornithology was the introduction of the English Sparrow. The extinction of the Great Auk, the passing of the Wild Pigeon and the Turkey,—sad as these are, they are trifles compared to the wholesale reduction of our smaller birds, which is due to the invasion of that wretched foreigner, the English Sparrow. To be sure he was invited to come, but the offense is all the more rank because it was partly human. His introduction was effected in part by people who ought to have known better, and would, doubtless, if the science of ornithology had reached its present status as long ago as the early fifties. The maintenance and prodigious increase of the pest is still due in a measure to the imbecile

sentimentality of people who build bird-houses and throw out crumbs for "the dear little birdies", and then care nothing whether honest birds or scalawags get them. Such people belong to the same class as those who drop kittens on their neighbors' door-steps because they wouldn't have the heart to kill them themselves, you know.

Taken near Columbus. *Photo by the Author.*

NOTHING IS TOO GOOD FOR THEM.

A "QUARRY HOLE" FORMERLY OCCUPIED BY ROUGH-WINGED SWALLOWS BUT NOW ENTIRELY GIVEN OVER TO THE NOISY FOREIGNERS.

The increase of this bird in the United States is, to a lover of birds, simply frightful. Their fecundity is amazing and their adaptability apparently limitless. Mr. Barrows, in a special report prepared under the direction of the Government, estimates that the increase of a single pair, if unhindered, would amount in ten years to 275,716,983,698 birds.

As to its range, we note that the subjugation of the East has long since been accomplished and that the conquest of the West is succeeding rapidly. It is only a question of a few years until it becomes omnipresent in our land.

It requires no testimony to show that the presence of this bird is absolutely undesirable. It is a scourge to the agriculturist, a plague to the architect and the avowed and determined enemy of all other birds. It is, in short, in the

words of Dr. Coues, "a nuisance without a redeeming quality." Altho we assent to this most heartily, we must confess on the part of our race to a certain amount of sneaking admiration for the Sparrow. And why, forsooth? Because he fights. We are forced to admire, at times, his bull-dog courage and tenacity of purpose, as we do the cunning of the weasel or the nimbleness of the flea. He is vermin and must be treated as such, but—give the Devil his due, of course. What are we going to do about it? Wage unceasing warfare as we do against mice and snakes. There is no ultimate issue to regard. The House Sparrow is no longer exterminable, but he can be kept within limits. No doubt there will be English Sparrows in cities as long as there are brick-bats, but the English Sparrow in the country is an abatable nuisance. He can be shot, and he ought to be. There are no English Sparrows about my present home, in a suburb of Columbus. A sensible and determined neighbor has plied the shotgun for several years and as a result Bluebirds, Chipping and Field Sparrows, Woodpeckers of all kinds, Warblers, Robins, Blue Jays, etc. are plentiful hereabouts. I prefer Bluebirds myself.

The Sparrow exhibits a most cosmopolitan taste in the matter of nesting sites. The normal half-bushel ball of trash in the tree-top is still adhered to by some builders, but the cavity left by a missing brick, a Woodpecker's hole—deserted upon compulsion—or a throne upon the scale-pan of Justice—done in stone upon the County court-house, and mercifully blind—will do as well. Of late the choicest rural sites have been appropriated, and the cliffs once sacred to the gentle Swallow, now resound with the vulgar bletherings and maudlin mirth of this avian blot on nature.

AMERICAN CROSSBILL
Loxia curvirostra
3/5 Life-size

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No. 18.

AMERICAN CROSSBILL.

A. O. U. No. 521. **Loxia curvirostra minor** (Brehm.).

Synonym.—Red Crossbill.

Description.—*Adult male*: Tips of mandibles crossed either way; plumage red, brightest on rump; feathers of back with brownish centers; wings and tail fuscous. Shade of red very variable,—orange, cinnabar, even vermilion, sometimes toned down by a saffron suffusion. *Immature males* sometimes present a curiously mottled appearance with chrome-green and red intermingled. *Female and young*: Dull olive-green, brighter and more yellow on head and rump; below gray overcast by dingy yellow. Adult male, length 5.50-6.25 (139.7-158.8); wing 3.40 (86.4); tail 2.05 (52.1); bill .70 (17.8) or under.

Recognition Marks.—Sparrow size; crossed mandibles; male red and female olive-green; both *without* white wing-bars.

"**Nest,** in forks or among twigs of a tree, founded on a mass of twigs and bark-strips, the inside felted of finer materials, including small twigs, rootlets, grasses, hair, feathers, etc. *Eggs*, 3-4, 0.75 x 0.57, pale greenish, spotted and dotted about larger end with dark purplish brown, with lavender shell-markings" (Coues). Av. size, .85 x .53 (21.6 x 13.5) (Brewer).

General Range.—Northern North America, resident sparingly south in the eastern United States to Maryland and Tennessee, and in the Alleghanies; irregularly abundant in winter.

Range in Ohio.—Nowhere of regular occurrence; occasional migrant or winter resident and rare breeder.

THERE are several species of northern birds which behave as if they had been moon-struck on some chilly Arctic night and whose most ardent friends as a consequence cannot deny that they are a little "queer;" the Red Crossbills, for example,—dear unsophisticated mortals who are still following the Julian calendar, and that only spasmodically. Normally confined to the coniferous timber of the Canadian highlands, they nevertheless drift south in straggling flocks and in very unmethodical fashion, and occasionally come upon us in great hordes which even the park policemen notice.

Then in spring, either because they dread to face renewed privations or because they vary their plain fare with the lotus buds of forgetfulness in the balmy Southland, some linger to nest and spend a careless summer. Especially is this the case in the Alleghanies and in the mountain regions of New York and New England. The nesting takes place according to no known law, eggs having been taken in mid-winter where the snow lay deep upon the ground, and again in July. And altho conifers are the sites usually chosen, the birds are not particular in this matter either—a leafless maple will do as well.

The Crossbill owes its peculiar mandibles to an age-long hankering for

pine-seeds—a desire fully satisfied according to the fashion of that Providence which works so variously through nature, and whose method we are pleased to call evolution. The bill of the bird was not meant for an organ of the finest precision, and Buffon, the Deist, once won a cheap applause by railing at the Almighty for a supposed oversight in this direction; but as a matter of fact its wonderful crossed mandibles enable the Crossbill to do what no other bird can, viz., pry open the scales of a pine cone and extract the tiny seed with its tongue. Besides this the bird is not so awkward in the use of its bill as was formerly supposed, since it frequently alights on the ground and picks up the fallen seeds, together with other food. Apples, left hanging, and mellowed by the frosts, are favorite winter tidbits, and the birds have been accused of doing some trifling damage to grain in the field.

Crossbills give out an intermittent rattling cry or excited titter, *tew, tew, tew,* while feeding. The flight note is a short, clear whistle, and a flock composed of separately undulating individuals affords a pleasing sensation to both eye and ear as it rapidly passes. The male is said to have a sprightly whistling song of a most agreeable character, and he sometimes opens the season as early as February.

Specimens kept in captivity exhibit some of the traits of Parrots. Thus, they grasp the wires of the cage with their bill as well as with their feet and move about by its aid. They hang head downward with indifference and they convey food to the mouth by holding it in one foot. It is not surprising that the birds are easily domesticated, even when full grown, since they are so unsuspicious as to admit of capture by the hand. I once caught an adult female in mid-air as a flock fluttered up confusedly from the ground. According to Dr. Brewer, a nest with eggs of this species was once secured early in March by Mr. Charles S. Paine, in East Randolph, Vt. "The nest was built in an upper branch of an elm—which, of course, was leafless—the ground was covered with snow, and the weather severe. The birds were very tame and fearless, refusing to leave their eggs, and had to be several times taken off by the hand. After its nest had been taken, and as Mr. Paine was descending with it in his hand, the female again resumed her place upon it, to protect her eggs from the biting frost."

No. 19.

WHITE-WINGED CROSSBILL.

A. O. U. No. 522. **Loxia leucoptera** (Gmel.).

Description.—*Male*: Rosy-red or carmine all over, save for grayish of nape and black of scapulars, wings, and tail. The black of scapulars sometimes meets on lower back. Two conspicuous white wing-bars are formed by the tips of the middle and greater coverts. Bill slenderer and weaker than in preceding species. *Female and young*: Light olive-yellow, ochraceous, or even pale orange over gray, clearer on rump, duller on throat and belly; most of the feathers with dusky centers, finer on crown and throat, broader on back and breast; wings and tail as in male, but fuscous rather than black; feather-edgings olivaceous. Very variable. Length 6.00-6.50 (152.4-165.1); wing 3.50 (88.9); tail 2.25 (57.2); bill .67 (17.).

Recognition Marks.—Sparrow size; crossed bill; conspicuous white wing-bars of both sexes.

Nesting.—Not known to breed in Ohio. "*Nest,* of twigs and strips of birch-bark, covered exteriorly with moss (*Usnea*) and lined with soft moss and hair, on the fork of an evergreen, in deep forests. *Eggs,* 3(?), pale blue, spotted and streaked near larger end with reddish brown and lilac, .80 x .55 (20.3 x 14.)" (Chamberlain).

General Range.—Northern parts of North America, south into the United States in winter. Breeds from northern New England northward.

Range in Ohio.—Of casual occurrence during migrations and in winter.

THE habits of this lesser known species appear to be substantially the same as those of *L. c. minor.* Its summer range lies for the most part further north, altho it also breeds in the mountains of the West. It is much less frequent in winter than the preceding species, altho it occasionally appears in great numbers.

"In the spring of 1869, Mr. Jillson, of Hudson, Mass., sent me a pair of these birds which he had captured the preceding autumn. They were very tame, and exceedingly interesting little pets. Their movements in the cage were like those of caged Parrots in every respect, except that they were far more easy and rapid. They clung to the sides and upper wires of the cage with their feet, hung down from them and seemed to enjoy the practice of walking with their heads downward. They were in full song and both the male and the female were quite good singers. Their songs were irregular and varied, but sweet and musical. They ate almost every kind of food, but were especially eager for slices of raw apples. An occasional larch cone was also a great treat to them. Altho while they lived they were continually bickering over their food, yet when the female was accidentally choked by a bit of eggshell, her mate was inconsolable, ceased to sing, refused his food, and died of grief in a very few days" (Brewer).

No. 20.

REDPOLL.

A. O. U. No. 528. **Acanthis linaria** (Linn.).

Synonyms.—COMMON RED-POLL; LINNET; LINTIE.

Description.—*Adult male*: Crown crimson; breast and shoulders crimson in varying proportions according to season; frontlet, lores, and throat-patch sooty black; remaining lower parts white, flanks and crissum streaked with dusky; above, variegated dusky, flaxen-brown and whitish, the feathers having dusky centers and flaxen edgings; rump dusky and white in streaks, tinged with rosy; wings and tail dusky with flaxen or whitish edgings; two inconspicuous wing-bars formed by white tips of middle and greater coverts. *Female*: Similar but without red on rump and breast, the latter suffused with buffy instead; sides heavily streaked with dusky. *Immature*: Like female but without crimson crown. Length 5.50 (139.7) or less; wing 2.80 (71.1); tail 2.30 (58.4); bill .34 (8.6); depth at base .23 (5.8).

Recognition Marks.—Warbler to Sparrow size; crimson crown-patch in adults; no dusky spot on breast.

Nesting.—Does not breed in Ohio. *Nest,* a bulky affair of twigs and grasses, lined with feathers and placed in trees and bushes. *Eggs,* 4-6, pale blue, dotted and speckled with reddish brown or umber. Av. size, .65 x .50 (16.5 x 12.7).

General Range.—Northern portions of northern hemisphere, south irregularly in winter, in North America to the Middle States.

Range in Ohio.—Of very irregular occurrence. Many winters will pass without any; at other times swarms are to be seen in the northern part of the state. Casual anywhere.

THESE rather rare hyperborean visitants are often allowed to pass for winter Goldfinches when they do occur. Indeed, the resemblance is most striking, both as to form and habits and notes as well. When the eyes have been opened by a near revelation of convincing red, then the ears remember also a slight foreign accent in the *"sweetie"* call and in the rattling flight notes.

Failure in the food supply in the Hudson Bay regions seems to afford the only excuse for the occasional southern flights of this species, since the birds are absolutely impervious to cold. When they do come they appear to materialize in great numbers out of the leaden sky along with the snowflakes; but they settle to a breakfast of weed-seeds or alder catkins as tho to the manor born, and have no apparent dread of dispossessing the Juncoes and Field Sparrows who already occupy the land. They are fond of pine trees, and if occasion offers, contentedly pick up the crumbs which fall from Master Crossbill's pine-cone table. Redpoll's manner is very confiding. He has had nothing to fear in his Greenland home, and he assumes that you will mind your business and let him mind his.

AMERICAN GOLDFINCH
Astragalinus tristis
⅞ Life size

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We are rewarded for our occasional hospitality by the sight of Redpoll at his best. During the actual breeding season, we are told by a competent observer in Greenland, Holbœll, the male not only becomes exceeding shy but loses his rosy coloring. It is hardly to be supposed that this loss of color is a protective measure, but rather that it is a result of the exhaustive labors incident to the season. Nature, in that forbidding clime, cannot afford to dress a busy workman in fine clothes. It is noteworthy in this connection that caged Redpolls also lose their rosy tints, never to regain them.

No. 21.

AMERICAN GOLDFINCH.

A. O. U. No. 529. **Astragalinus tristis** (Linn.).

Synonyms.—WILD CANARY; YELLOW-BIRD (wrongly so called); THISTLE-BIRD.

Description.—*Adult male in breeding plumage*: Back and below bright yellow, whitening on upper tail-coverts; crown-patch black; wings black with white-tipped coverts and secondaries; tail black, each feather with white spot on inner web. *Adult female*: Above grayish brown or olivaceous; wings and tail dusky rather than black; below whitish with buffy or yellow suffusion, brightest on throat. *Male in winter*: Like female except that wings and tail are black; the plumage tends also to more positive whites. Length 5.00 (127.); wing about 2.75 (69.9); tail 2.00 (50.8); bill .40 (10.2).

Recognition Marks.—Warbler size; black and yellow contrasting; undulating flight; Canary-like notes.

Nest, a beautiful, compact structure of vegetable fiber, "hemp," grasses, etc., lined with vegetable cottons or thistle-down, and placed at different heights in trees or bushes, usually in upright crotches. *Eggs,* 3-6, pale bluish white, unspotted. Av. size, .65 x .52 (16.5 x 13.2).

General Range.—Temperate North America; winters mainly within the United States; breeds from middle regions north.

Range in Ohio.—Of universal distribution,—perhaps less plentiful in southern part of state.

"HANDSOME is that handsome does," we are told, but the Goldfinch fulfills both conditions in the proper sense, and does not require the doubtful apology of the proverb, which was evidently devised for plain folk. One is at a loss to decide whether nature awarded the Goldfinch his suit of fine clothes in recognition of his dauntless cheer or whether he is only happy because of his panoply of jet and gold. At any rate he is the bird of sunshine the year around, happy, careless, free. Rollicking companies of them rove the country side,

now searching the heads of the last year's mullein stalks and enlivening their quest with much pleasant chatter, now scattering in obedience to some whimsical command and sowing the air with their laughter. *"Perchic-opee"* or *"perchic-ichic-opee"* says every bird as it glides down each successive billow of its undulating flight. So enamoured are the Goldfinches of their gypsy life that it is only when the summer begins to wane that they are willing to make particular choice of mates and nesting spots. As late as the middle of July one may see roving bands of forty or fifty individuals, but by the first of August they are usually settled to the task of rearing young. The nesting also appears to be dependent in some measure upon the thistle crop. When the weeds are common and the season forward, nesting may begin in June; but when thistle down is scarce or wanting the birds seem loth to begin without an abundant supply of their favorite nest lining.

Nests are placed in the upright forks of various kinds of saplings or even of growing plants, in which latter case the thistle, again, proves first choice. The materials used are the choicest obtainable. Normally the inner bark of hemp is employed for warp, and thistle-down for woof and lining, so that the whole structure bleaches to a characteristic silver-gray. In the absence, or scarcity of these, grasses, weeds, bits of leaves, etc. are bound together with cobwebs and the whole felted with other soft plant-downs or even horse-hair. The whole is made fast throughout its depth to the supporting branches and forms one of the most durable of summer's trophies.

From four to six, but commonly five, eggs are laid, and these of a delicate greenish blue. Fourteen days are required for hatching and from the time of leaving the nest the youngsters drone *babee! babee!* with weary iteration, all through the stifling summer day.

During the nesting season the birds subsist largely upon insects of various kinds, especially plant lice, flies, and the smaller grasshoppers, but at other times they feed almost exclusively upon seeds. They are very fond of sunflower seeds, returning as they do to a favorite head day after day until the crop is harvested. Seeds of the lettuce, turnips, and other garden plants are levied upon freely where occasion offers, but thistle-seed is a staple article, and that is varied by a hundred seeds besides, which none could grudge them.

Throughout the winter the Goldfinches are much less in evidence, partly because of their subdued colors, the yellow having given place to dingy white; and partly, it would appear, from the fact that considerable numbers retire more or less regularly to the South at that season. But wherever found the Goldfinch has the same merry notes and sprightly ways, so that he is endeared to the hearts of all.

No. 22.

PINE SISKIN.

A. O. U. No. 533. **Spinus pinus** (Wils.).

Synonyms.—AMERICAN SISKIN; PINE FINCH; PINE LINNET.

Description.—*Adult male and female*: Above brownish buffy; below creamy-buff and whitish; everywhere streaked with dusky or dark olive-brown; the streakings are finer on the head and fore-parts, coarser on back and breast; wings fuscous, the flight-feathers sulphur-yellow at the base, and the primaries edged with the same color; tail fuscous, all but the middle feathers sulphur-yellow at base. Bill comparatively slender, acute. Length 4.75-5.00 (120.6-127.); wing 2.75 (69.9); tail 1.80 (45.7); bill .43 (10.9).

Recognition Marks.—Warbler size; conspicuous general streakiness, sulphur-yellow markings of wings and tail, most noticeable in flight.

Nest, of grasses, twigs and vegetable fibers, lined with hair, plant-down or feathers, and placed, usually, high in coniferous trees. *Eggs,* 4, greenish or bluish white, spotted with reddish brown. Av. size, .68 x .47 (17.3 x 11.9).

General Range.—North America at large, breeding in higher latitudes and in mountains of the West; also, sparingly, in northeastern United States.

Range in Ohio.—Common but irregular in winter and during migrations in the north; less common southerly. Possibly breeds sparingly in northern portion.

THE Pine Siskin is one of those happy-go-lucky mortals (he is mortal, is he not?) whose habits are the despair of all guide-books. We know him for a northern bird, and by all analogies he ought to quit our hospitable woods not later than the middle of May; but with the most reckless unconcern he lingers through May and into June,, until we are disposed to chide him for neglect of the primal instinct, or else to wonder whether the rollicking, roving bands may not have nests to watch that we know not of. Siskins have been found in Northern Ohio during every month of the year, but whether they nest or not is still undetermined.

Their actions were still more puzzling at my home in Eastern Washington. There we lived not above twenty miles from the timber-clad mountains where they might have been supposed to breed, and yet roistering troops of them made free with the shade trees of our front yard, as the whim seized them, throughout every month of the year, save winter. Either these companies were composed of young bachelors too frivolous to love, or else they were made up of communists whose lives were too happy in general to permit them to think of particularizing in their affections. A recent writer[1] asserts that they do nest in small colonies, three or four pairs in a tree, and that it is difficult to determine which particular bird is most interested in a given nest.

1 C. W. Bowles in "The Condor," January, 1903, p. 15.

In many respects the Siskins resemble their more familiar cousins, the Goldfinches; they cultivate a graceful, undulatory, or looping flight, chirruping as they go; and like them they have "a habit of singing in a lively, rambling sort of way for an hour or more at a time." On the other hand their love of pine trees and the seeds of pine cones links them closely to the Crossbills and their rattling cry is quite suggestive of the common notes of these birds. They have one note, however, which is entirely distinctive. It is a labored but singularly penetrating production with a peculiar vowel quality (like a German umlauted u), *zuem* or *zeem*. At the same time the bird often displays his wing with its sulphur-colored watermark, and speedy recognition follows.

No. 23.

SNOWFLAKE.

A. O. U. No. 534. **Passerina nivalis** (Linn.).

Synonym.—Snow Bunting.

Description.—*Adult male in summer*: Pure white save for bill, feet, middle of back, scapulars, bastard wing, the end half of primaries and inner secondaries, and the middle tail-feathers, which are black. *Female in summer*: Similar, but upper parts streaked all over with black, and the black of wings largely replaced by fuscous. *Adults in winter*: Entire upper parts overcast with browns—rusty or seal brown—clear on crown, grayish and mottled with dusky centers of feathers on back, scapulars, etc.; also rusty ear-patches, and a rusty collar, with faint rusty wash on sides. The black of wing and tail-feathers is less pure (fuscous in the female) and edged with white or tawny. Length 6.50-7.00 (165.1-177.8); wing 4.12 (104.6); tail 2.54 (64.5); bill .40 (10.2).

Recognition Marks.—Sparrow size; conspicuously and uniquely white, with blacks and browns above.

Nesting.—Does not breed in Ohio. "*Nest,* on the ground in the sphagnum and tussocks of Arctic regions, of a great quantity of grass and moss, lined profusely with feathers. *Eggs,* 4-6, very variable in size and color, about .90 x .65 (22.9 x 16.5), white or whitish, speckled, veined, blotched, and marbled with deep browns and neutral tints" (Coues.).

General Range.—"Northern parts of the northern hemisphere, breeding in the Arctic regions; in North America south in winter into the northern United States, irregularly to Georgia, southern Illinois, Kansas and Oregon."

Range in Ohio.—Occurs irregularly in winter,—more commonly northerly.

THE guests of winter form a distinct category in the bird-man's reckoning. There are loyal hearts which no adversity of winter elements (short of sheer freezing, which is brutal) can drive from our midst—Song Sparrows, Titmice, Nuthatches—and to these we pay appropriate honors. But, after all,

SNOWFLAKE
Passerina nivalis
Life size

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these simple-hearted creatures, who refuse to budge from their native heaths and tree-boles, lack not only the culture of travel in foreign parts, but the dash and wild romance of those who hazard their fortune to the north wind. What treasures of choice spirits are poured out upon us when the winds blow raw and the streams hide their faces! Hardy Norsemen they,—the Redpolls, the Longspurs, the Horned Larks, and the Snowflakes. They burst upon us in the wake of the first storm, and set up in our back pastures a wintry Valhalla, where good cheer of a very sturdy sort reigns supreme.

In spite of striking differences of form and color a strange similarity exists among these northern visitors, so that one may easily construct a mental *genre* picture—or, at most, two such—which will fairly represent them all. Thus the Snowflakes, the Longspurs, the Horned Larks,—and through them even the daft Pipits—have a common fashion of giving themselves to the air to be blown about at hazard; or, when the season advances, of setting their faces also with equal steadfastness against the gainsaying of the blast. Their notes, too, (excepting this time the inane yipping of the Pipit) have a wierd wind-born quality which is inseparable in thought from the shrill piping of the storm. To carry the matter further, the Siskins, the Crossbills, the Purple Flinches and the Redpolls have each a mellow rattle, which lends itself with equal facility to that generic conception of the ice-berg children. The dialect may differ, but in all of them the accent is Hyperborean.

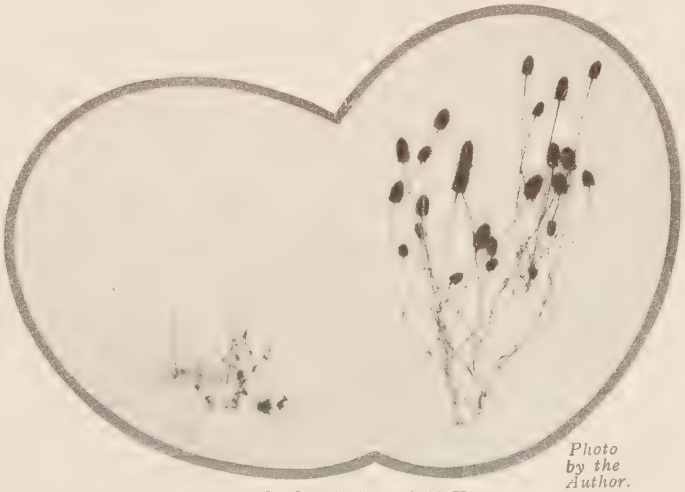


Photo by the Author.

IN SNOWFLAKE PARK.

I well remember my first meeting with that prince of storm waifs, the Snowflake. It was in eastern Washington, where the climate is not less hospitable than that of much lower latitudes farther east. A distant-faring, feathered stranger had tempted me far afield, when, all at once, a fluttering snowdrift, contrary to nature's wont, rose from earth toward heaven. I held my breath while I listened to the mild Babel of *tut-ut-ut-tews* with which the Snow Buntings greeted me. The birds were loath to leave the place, and hovered indecisively while the bird-man drank them in. As they moved slowly off each bird seemed alternately to fall and struggle upward through an arc of five or six feet, independently of his

fellows, so that the flock as a whole produced quite the effect of a troubled snowstorm.

Snowflakes occur singly or associated in flocks of from a dozen to several hundred individuals. Their thrilling, vibrant call note, *tew* or *te-ew,* may be heard during the falling of the real flakes, when the passing bird is invisible. Careful scrutiny of loosely flocking Horned Larks may occasionally discover a stray Snowflake, as also a few Lapland Longspurs.

Probably no winter passes in which a few of the birds do not reach our northern borders. But they rarely extend below the middle of the state, and only during the most severe winters are they found anywhere in large numbers. While with us they move from field to field in open places, seeking out the weed-seed which forms their almost exclusive diet. A few individuals may linger long enough in the spring to display the deeper browns and blacks of the breeding plumage.

No. 24.

LAPLAND LONGSPUR.

A. O. U. No. 536. **Calcarius lapponicus** (Linn.).

Description.—*Adult male in summer*: Head, throat, and fore-breast black; a buffy line behind eye and sometimes over eye; a broad nuchal patch, or collar, of chestnut; remaining upper parts brownish black streaked with rufous, buffy, or whitish edges of feathers; below white, heavily streaked with black on sides and flanks; tail fuscous with oblique white patches on three outer feathers; bill yellow with black tip. *Female in summer*: Similar, but no continuous black or chestnut anywhere; the black of head mostly confined to centers of feathers,—these edged with buffy; the chestnut of cervical collar faintly indicated as edging of feathers with sharply outlined dusky centers; black of throat and breast pretty thoroughly obscured by grayish edging, but the general pattern retained; sides and flanks with a few sharp dusky streaks. *Adult male in winter*: Lighter above; the black of head, and chestnut of cervical collar partially overlaid with buffy or whitish edging; the black of throat and breast more or less obscured by whitish edging. Length 6.50 (165.1) or less; wing 3.70 (94.); tail 2.53 (64.3); bill .40 (10.2); hind claw .45 (11.4); hind toe and claw .75 (19.1).

Recognition Marks.—Sparrow size; terrestrial habits; black head and breast of male. The species may be readily distinguished from the Horned Lark, with which it sometimes associates, by the greater extent of its black areas, and by the chirruping or rattling cry which it makes when rising.

Nesting.—Does not breed in Ohio. "*Nest*, of grasses and moss, lined with grasses, on the ground. *Eggs*, 4-6, bluish white, almost obscured by uniform grayish brown, .82 x .60 (20.8 x 15.2)" (Chapman).

General Range.—Northern portions of the northern hemisphere, breeding far north; in America south in winter to the northern United States, abundantly in the interior, to Kansas and Colorado, irregularly to the Middle States.

Range in Ohio.—A frequent but irregular winter visitor, more common in northern portion of state; casual south.

ONLY now and then does one come upon a company of these hardy Laplanders, for their principal winter range is further west. They are to be found industriously gleaning fallen weed-seed from the ground, pastures, stubble fields, and waste places, or moving about in rather compact flocks through the air. Not infrequently small numbers of them join a winter band of Horned Larks at table in some choice feeding lot for cattle. At such times they move about freely among the other birds, but are readily distinguished from them by their black heads.

If one would get the full effect of Longspur's diagnostic mark, he should creep on hands and knees over a rolling stubble-field on a chilly April day. It will heighten the effect, not of the bird's color, but of the observer's boreal sensations, if a sullen sky be added, and little pellets of sleet be dropped here and there over the field. With eyes agog and glasses in readiness, you advance cautiously. There is nothing but clods and stubble in sight. You feel sure that there are birds all about you, for you saw them settle right there. At length, a long way off, a single anxious black head is descried as it is thrust up into view; but before you level on it, one, two, three, a dozen birds, are up and off, who were within a rod of you. But by and by (it may be only after days) the clods are differentiated, and some kindly resolve themselves into birds' heads, at close range. Even the stubble is gracious, and gradually discloses skulking females of obscure coloration, and who had only been known to you before as voices and things in the air. The chirruping rattle of this bird has, somehow, the power of calling out all the wild instinct of a man, the primitive, wind-forged, and untamable Norse core, which lies ill at ease beneath this thin veneer of spoon-fed civilization. It is like a rune from the elder Edda, challenging the unspoiled spirit to arise and do battle with the fiery flying drake.

According to Mr. E. W. Nelson,[1] who found this species breeding abundantly on the grassy flats near St. Michaels, Alaska, the birds arrive there early in May, while the ground is still largely covered with snow, and by the middle of that month they are common. "The males, as if conscious of their handsome plumage, choose the tops of the only breaks in the monotonous level, which are small, rounded knolls and tussocks. The male utters its song as it flies upward from one of these knolls, and when it reaches the height of ten or fifteen yards, it extends the points of its wings upwards, forming a large V-shaped figure, and floats gently to the ground, uttering as it slowly sinks, its liquid tones which fall in twinkling succession upon the ear, and are,

1 Quoted by Prof. Butler. "Birds of Indiana," p. 531.

perhaps, the sweetest notes that one hears during the entire springtime of these regions. It is an exquisite jingling melody, having much less power than that of the Bobolink, but with the same general character, and, though shorter, it has even more melody than the song of that well-known bird. The nests are placed on the drier portions of the flats; a hummock or tuft of grass is chosen, or perhaps a projecting bunch of dwarf willow stems, and, as one comes directly upon it, the female usually flutters off under one's feet."

No. 25.

VESPER SPARROW.

A. O. U. No. 540. **Poœcetes gramineus** (Gmel.).

Synonyms.—GRASS FINCH; BAY-WINGED BUNTING.

Description.—*Adults*: General tone of upper parts slaty or grayish brown on the edges of the feathers, modified by the dusky centers, and warmed by delicate traces of rufous; bend of wing bay, concealing dusky centers; wings and tail fuscous with pale tawny or whitish edging,—outer tail-feathers principally or entirely white, the next two pairs white, or not, in varying amount; below sordid white, sharply streaked on breast, flanks, and sides with dusky brown; the chin and throat with small arrow marks of the same color and bounded by chains of streaks; auriculars clear hair-brown, with buffy or lighter center; usually a buffy suffusion on streaked area of breast and sides. Length 5.75-6.25 (146.1-158.8); wing 3.16 (80.3); tail 2.35 (59.7); bill .42 (10.7);—av. of five Columbus specimens.

Recognition Marks.—Sparrow size; general streaked appearance; dusky-streaked breast on sordid ground (in the Song Sparrow, with which alone it could be confused in this particular, the streaking is more rufous and the ground color clearer white); white lateral tail-feathers conspicuous in flight.

Nest, on ground, neatly lined with grasses, rootlets and horse-hair. *Eggs,* 4 or 5, pinkish-, grayish-, or bluish-white, speckled, spotted and occasionally scrawled with reddish brown. Av. size, .82 x .60 (20.8 x 15.2).

General Range.—Eastern North America to the Plains, from Nova Scotia and Ontario southward; breeds from Virginia, Kentucky and Missouri northward.

Range in Ohio.—Abundant summer resident; of general occurrence.

A sober garb cannot conceal the quality of the wearer, even tho Quaker gray be made to cover alike saint and sinner. Plainness of dress, therefore, is a fault to be readily forgiven, even in a bird, if it be accompanied by a voice of sweet sincerity and a manner of self-forgetfulness. In a family where a modest appearance is no reproach, but a warrant to health and long life, the Vesper Sparrow is pre-eminent for modesty. You are not aware of his

presence until he disengages himself from the engulfing grays of the stalk-strewn ground or dusty roadside and mounts a fence-rail to rhyme the coming or the parting day.

The arrival of Vesper Sparrow in middle early spring may mark the supreme effort of that particular warm wave, but you are quite content to await the further travail of the season while you get acquainted with this amiable newcomer. Under the compulsion of sun and rain the sodden fields have been trying to muster a decent green to hide the ugliness of winter's devastation. But wherefore! The air is lonely and the fence rows untenanted. The Meadow Larks, to be sure, have been romping about for several weeks

Taken near Oberlin. *Photo by the Author.*

NEST AND EGGS OF VESPER SPARROW.

and getting bolder every day, but they are boistrous fellows, drunk with air and mad with sunshine; the winter-sharpened ears wait hungrily for the poet of common day. The morning he comes a low, sweet murmur of praise is heard on every side. You know it will ascend unceasingly thenceforth, and spring is different.

Vesper Sparrow is the typical ground bird. He eats, runs, sleeps, and rears his family upon the ground; but to sing—Ah! that is different!—

nothing less than the top rail of the fence will do for that; a telegraph pole or wire is better, and a lone tree in the pasture is not to be despised. The males gather in spring in such places to engage in decorous concerts of rivalry. The song consists of a variety of simple pleasing notes, each uttered two or three times, and all strung together to the number of four or five. The characteristic introduction is a mellow whistled *hē-ho* a little softer in tone than the succeeding notes. The scolding note, a thrasher-like kissing sound, *tsook,* will sometimes interrupt his song if a strange listener gets too close. Early morning and late evening are the regular song periods, but the conscientious and indefatigable singer is more apt to interrupt the noon stillness than not.

Since the Vesper Sparrow is a bird of open country and uplands, it cares little for the vicinity of water, but it loves the dust of country roads as dearly as an old hen, and the daily dust bath is a familiar sight to every traveler. While seeking the food of weed-seeds and insects it runs industriously about upon the ground, skulking rather than flitting for safety. Altho not especially timorous, it appears to take a sort of professional pride in being able to slip about among the weed-stems unseen.

It is, of course, at nesting time that the sneak-ability of the bird is most severely tested. The nest, a simple affair of coiled grasses, is usually sunk so that the brim comes flush with the ground. For the rest the bird seeks no other protection than that of "luck" and its own ability to elude observation when obliged to quit the nest. The ruse of lameness is frequently employed where danger is imminent. At other times the sitting bird is shrewd enough to rise at a considerable distance.

Two and sometimes three broods are raised in a season, the first in late April, the second in late June or early July. Upland pastures and weedy fields are the favorite spots for the rearing of young, but plowed ground is sometimes usurped if left too long, and roadsides are second choice.

There is reason to believe that this species has invaded the state within the historic period, since Audubon expressly states that he did not meet it in Ohio. At any rate it is gradually increasing in numbers and its range extending as the forests dwindle.

No. 26.

SAVANNA SPARROW.

A. O. U. No. 542a. **Passerculus sandwichensis savanna** (Wils.).

Description.—*Adults in spring*: Superciliary line and edge of wing near alula pale yellow (at a distance often not distinguishable from white); a buffy or whitish median crown line separating two broad, blackish stripes; blackish (but poorly defined) maxillary, rictal, and post-ocular stripes,—the last two usually meeting behind and enclosing the buffy auriculars; above, in general, brownish black, the feathers having black centers, bordered first by rufous or ochraceous buff, then by ashy; below, white or sordid, the belly and crissum unmarked; the chin and throat with tiny, and the breast with large, wedge-shaped spots of brownish-black (sometimes coalescing to form central blotch); sides and flanks heavily streaked with the same. At other seasons and in young birds, the yellow is more pronounced and the general pattern is somewhat obscured by a buffy or ochraceous suffusion. Adult male, length 5.30-5.60 (134.6-142.2); wing 2.75 (69.9); tail 2.10 (53.3); bill .40 (10.2). Female averages a little smaller.

Recognition Marks.—Warbler size (but much more robust in appearance than a warbler); general streaky appearance; the striation of the head, viewed from before, radiates in twelve alternating black and white (or yellowish) areas.

Nest, on the ground, sunken flush with surface, lined indifferently with grasses. *Eggs,* 4-6, greenish- or bluish-white, heavily spotted, mottled, or washed with reddish brown or lilac. Av. size, .78 x .56 (19.8 x 14.2).

General Range.—Eastern North America, breeding from the northern United States to Labrador and Hudson Bay territory.

Range in Ohio.—Spring and fall migrant; not very common, and of local distribution. A few remain to breed.

DR. WHEATON'S statement: "Very common spring and fall migrant in southern and eastern, and probably summer resident in northern Ohio", is somewhat puzzling and perhaps a little irritating to one who, having spent at least parts of eleven seasons in the field, has encountered only three isolated examples of the species in the state. The Doctor probably depended greatly upon some favored haunt near Columbus not now known. I find upon inquiry that most available notebooks of the present day contain only scattering and meager references to this rather rare and irregular migrant. Mr. H. C. Oberholser, in his "Birds of Wayne County" says of it: "A transient visitor; apparently rare, though in proper localities usually to be found in spring. Not observed in the fall. It arrived about the middle of April, the sixteenth of this month being the earliest date recorded." Rev. W. F. Henninger in "Birds of Middle Southern Ohio",[1] says, "A common transient, but not so common as a summer resident. Arrival April 28, 1898, April 5, 1899; departure Oct. 17, 1894, Oct. 29, 1897, Nov. 25, 1898." It has no place among the recent records of the Wheaton Club in Columbus.

1 The Wilson Bulletin, No. 40, Sept., 1902, p. 87.

My two Columbus dates are April 24, 1902, and March 19, 1903, the latter being the earliest of which I have information, a typical example of that wonderful warm wave which amazed the oldest ornithological inhabitants. Prof. A. W. Butler, in his "Birds of Indiana", records it as a rare resident in the lower Wabash Valley and gives a few instances of its breeding in that state. The instance recorded by Dr. Wheaton on the anthority of Mr. H. C. Benson of Gambier is the only positive breeding record of this state of which I am aware.

The Savanna Sparrow is found during migrations along the bushy banks of streams, in weedy fields and bottom-land meadows, together with their interrupting fence-rows and hedges. In habits and appearance it most nearly resembles the Vesper Sparrow, but may be instantly distinguished by the conspicuous way in which it "parts its hair". Like the other bird, it pitches suddenly off its perch when disturbed and flies rapidly above the surface of the ground, following every inequality with bewildering precision. Its song is described as a "curious, squeaky affair", as inconspicuous as the bird.

No. 27.

GRASSHOPPER SPARROW.

A. O. U. No. 546. **Coturniculus savannarum passerinus** (Wils.).

Description.—*Adults in spring*: Crown blackish brown, parted by a median stripe of buffy gray; nape gray, spotted with chestnut; remaining upper parts black and fuscous, feathers edged with gray and tipped with rufous in varying proportions (a single feather, as from the greater wing-coverts, will exhibit the four colors); below, buffy gray, brightest on the breast; the sides and flanks washed with rufous; an elongated spot over the eye, bend of the wing, and edge of wing near alula, yellow; bill horn-color above, yellow below; feet yellow. *In winter*: Brighter colored, with less of black and more of chestnut. Length 4.85-5.20 (123.2-132.1); av. of five Columbus specimens: wing 2.48 (63.); tail 174.6 (44.2); bill .43 (10.9). Female slightly smaller.

Recognition Marks.—Warbler size; unmarked below; bright yellow edge of wing; grasshopper notes; an obscure, close-hiding, terrestrial species. Young birds of this species are streaked below, while those of the Henslow Sparrow are unmarked below (Jones).

Nest, on the ground, well concealed by grass tussock; made of grasses, and sometimes lined with hair. *Eggs,* 4-6, clear white, speckled and spotted with reddish brown, chiefly about larger end. Av. size, .73 x .55 (18.5 x 14.).

General Range.—Eastern United States and southern Canada, west to the Plains; south in winter to Florida, Cuba, etc.

Range in Ohio.—Common summer resident. Of local occurrence.

THOSE bird lovers who disclaim all interest in entomology will be slow in discovering the humble species, for its song is nearer like the chirring of some insect than the voice of a bird. There always comes a day in late April when the half-grown meadows and fields are suddenly found to contain from one to six pairs each of these buzzing Sparrows. But with the possible exception of certain warblers, there is no other bird of anything like the abundance of this one, whose very outline is so nearly unknown to all but the experienced bird-watcher. Its coloration is the plainest possible, its station lowly, and its habits secretive. Perched upon some weed-top, or standing on a fence-rail, the male sends out at regular intervals a weak hissing trill which occupies a fraction over a second in delivery .The sound is not exactly like that of any known insect, but is comparable to the clicking of a locust—or better to the shrilling of the corydalis. Again, the opening and closing of a loud-ticking watch, especially if it be opened with a clatter and shut with a snap, is suggestive of the strange performance. Later in the season a longer effort is sometimes heard. First comes the full "chirr", then slow notes, three or four in number, as tho the progress of the "wheels" were somewhat impeded; after which the burr proceeds with the original or accelerated rapidity—the whole occupying three seconds. The song will carry a hundred yards for a sharp ear, or further if the ear be laid to the ground; but a fresh cold in the head will spoil the concert at thirty feet.

Only once did I see a Grasshopper Sparrow holding forth from the top of a tall sapling in a fence-row. Surely he must have atoned for his boldness by skulking among the grass roots for two days thereafter. The birds require to be nearly stepped upon — technically "kicked out" — before they will take wing. Some will move off in a flurried zigzag, but others with a direct buzzing flight like a bee, — in both cases to plump down into the weeds at no great distance.

The nest, a rather careless affair of curled grasses, is placed at the foot of a clover plant or grass tussock, and its discovery is usually due entirely to accident since the female is a close sitter. One might find a needle in a haystack by remov-

Photo by the Author.

THE HAYSTACK.

THERE IS A SPARROW'S NEST SOMEWHERE IN THE FOREGROUND BUT PRECISELY WHERE DEPONENT SAITH NOT.

ing his shoes and trampling vigorously. Some such method would doubtless discover Grasshopper Sparrows' nests, but it is not recomended. The eggs are quite unlike any others found in similar situations, but are likely to be foredoomed by the presence of one or more of those of the wily Cowbird. Two broods are usually raised in a season.

The Grasshopper Sparrow is somewhat irregular in distribution, being abundant in some localities and unaccountably absent in others apparently no less favorable. There is reason to believe that it is extending its range, especially northward and eastward. Thus, it made its first appearance in Lorain County in the spring of 1894, and has never been missing since.

No. 28.

HENSLOW SPARROW.

A. O. U. No. 547. **Ammodramus henslowii** (Aud.).

Description.—*Adult*: Head above, nape, and sides of neck bright olive-buff; crown glossy black separated by median buffy line, gradually mingling with the olive behind and passing out on the nape in a series of black spots; the feathers of the back and scapulars black, broadly margined with chestnut, and narrowly edged with whitish; wings chestnut, but bend and edge pale yellow, and flight-feathers fuscous; rump tawny saffron with black streaks; middle rectrices and upper coverts rufous, with black shafts; below warm buff, paler and unmarked on chin, with heavy sagittate spots on breast and sides; middle of belly white; crissum tawny; lores and cheeks buff; maxillary and post-ocular stripes and rictal stripes enclosing auriculars, black; bill reddish brown; feet yellow. *Young birds* lack much of the olive-buff above, and are white rather than buffy below. Length 4.61 (117.1); wing 2.07 (52.6); tail 1.93 (49.); bill .42 (10.7). Females slightly smaller.

Recognition Marks.—Warbler size; olive-buff of head and neck above contrasting with chestnut and black of back; warm buff with black markings of breast and sides.

Nest, similar to that of preceding species. *Eggs,* 4 or 5, pale greenish- or grayish-white, heavily dotted and blotched with reddish brown and lilac. Av. size, .75 x .57 (19.1 x 14.9).

General Range.—Eastern United States west to the Plains, north to southern New England and Ontario.

Range in Ohio.—Very rare or casual summer resident. Found in Lorain county, and during the season of 1894, only.

DR. WHEATON admits this Sparrow to a place on the Ohio List upon the sole ground of a statement by Audubon, that it was accidental in Ohio. This statement, so far as I am aware, has received positive confirmation only once, but the bird is known to breed regularly in northern Indiana, and eggs have been taken in southern Michigan.

On the evening of June 4th, 1894, near Oberlin, while returning in a buggy with my friend, Lynds Jones, from a collecting trip along the Lake Erie shore, we heard a strange bird-note in a neighboring wheat-field. It was the same season in which the Grasshopper Sparrow first made its appearance at Oberlin and we were prepared for novelties. Mr. Jones, who was familiar with this species in Iowa, had previously described the note to me so perfectly that we both exclaimed "Henslow's!" and sprang from the buggy. The ventriloquial voice with its lisping notes, *"itse-tse-tsip"* led us a merry chase in the gathering dusk, and our devious wanderings through the growing grain brought out a vigorous protest from the owner of the field. But we muttered something about "state record" just as Jones pressed the trigger, and the farmer nobly forgave us in the name of Science. Fumbling in the dark for the little body which, unfortunately, meant more to us dead than alive—Science is *so* skeptical—we hurried home with the treasure. Mr. Jones saw other birds in the vicinity of Oberlin later that season, and they undoubtedly bred there, but no other occurrences have been reported in the state.

The Henslow Sparrow is a shy recluse of old fields and lowland meadows. It is a persistent 'songster', but shuns doubtful applause and scurries through the grass like a wood mouse, when alarmed. When it thinks it is being pursued it is apt to thrust its head under leaves or grass and pause motionless in fancied security, leaving the unhidden portion to shift for itself.

No. 29.

NELSON SPARROW.

A. O. U. No. 549.1. **Ammodramus nelsoni** (Allen).

Description.—*Adult*: Crown rich dark brown, without distinct median stripe; feathers of back, and especially scapulars, umber brown with conspicuous white, or pale buffy, edgings; breast, sides, and flanks deep buff or ochraceous, the breast marked, if at all, with a few narrow dusky streaks, the sides more heavily and broadly marked in chains; the buffy sides of the head include slaty auriculars and a dark brown post-ocular stripe, which turns up at the posterior extremity; throat and belly clear white. "Length 5.50 (139.7); wing 2.25 (57.2); tail 1.90 (48.3); bill .43 (10.3)" (Dwight).

Recognition Marks.—Warbler size; heavy buffy coloration on breast and sides, obscurely streaked; shy, secretive habits.

Nesting not well known; described as similar to that of the Leconte Sparrow. *Nest,* of grasses, carefully concealed in tussock or on ground. *Eggs,* 4 or 5, greenish-, or grayish-white, thickly speckled or spotted, chiefly about larger end, with browns and blacks.

General Range.—Fresh marshes of the interior, from northern Illinois northward to North Dakota and Manitoba; south in winter to Texas; in migrations visits the Atlantic Coast, New England, and lower Hudson Valley to Charleston, South Carolina. Accidental in California.

Range in Ohio.—One record, Ashtabula, Jefferson county, by Robert J. Sim, 1902.

IF in moments of insight we are sometimes tempted to bless our obscurity, we have good example for it in this shy little Sparrow. The probabilities are that the bird trespasses upon our borders yearly, yet, so far, only one sharp eye has caught him poaching. Certain it is that he is abundant in the interior, and certain it is that he is not uncommon on the Atlantic coast in winter. Ergo —he must pass over Ohio, at least occasionally; and what more natural than that he should pause for breakfast somewhere in the hospitable swamps which line the southern shores of Lake Erie? It gives ornithologists a properly chastened sense to realize that here is one bird at least which is still too clever for him. But on second thought we pocket our chagrin good naturedly; for here is one bird, too, whose humble, stealthy ways deliver him from the seat of scorn upon mi-lady's bonnet and whose eggs are not found in every small boy's sawdust box.

The Nelson Sparrow was first described from the Calumet marshes near Chicago in 1877. Since then it has been found numerously in the prairie marshes of the West, but as yet comparatively little is known of its life history. Col. Goss (Birds of Kansas, 1891, 449) speaks of the song as "a short, weak, unmusical twittering warble." Certain parties[1] are said to have found it

1 Mr. Walter Raine and Mr. G. F. Dippie. See Davie, "Nests and Eggs of N. A. Birds," p. 374.

breeding in Manitobia. It is a skulker of the deeper swamps, and as such is consistently opposed to any course of action calculated to bring it before the public eye.

With reference to the single occurrence in Ohio, Mr. Sim says: "My specimen of the Nelson Sparrow was taken near the mouth of Cowles Creek, Geneva, Ohio. The bird was first seen at 7 P. M. (May 17,1902) skulking among the weeds of a barren tree-fringed knoll several acres in extent. It finally ascended to the lower branches of a stunted thorn-tree overhanging the beach of the lake. It regard to the color and markings this was the most exquisite little Sparrow that I have seen. The upper parts were striped as evenly as the back of a chipmunk and the stripes of the head were beautiful in their contrast and arrangement. But the large feet, small wings, and short tail gave the bird an odd look—almost railish."

No. 30.

LARK SPARROW.

A. O. U. No. 552. **Chondestes grammacus** (Say).

Synonym.—QUAIL-HEAD.

Description.—*Adult*: Head variegated black, white, and chestnut; lateral head-stripes black in front, chestnut behind; auriculars chestnut, bounded by rictal and post-orbital black stripes; narrow loral, and broader submalar black stripes; malar, superciliary, and median stripes white, the two latter becoming buffy behind; upper parts buffish gray-brown, clearest on sides of neck, streaked by blackish brown centers of feathers on middle back and scapulars, persisting as edging on the fuscous wings and tail; tail-feathers, except middle pair, broadly tipped with white; below white, purest on throat and belly, washed with grayish buff on sides and crissum, also obscurely across fore-breast, in which is situated a central black spot. Length 6.25 (158.8); wing 3.39 (86.1); tail 2.62 (66.6); bill .46 (11.7).

Recognition Marks.—Sparrow size; head variegated black, white, and chestnut; fan-shaped tail broadly tipped with white and conspicuous in flight (thus easily distinguished from the Vesper Sparrow with square tail and lateral white feathers).

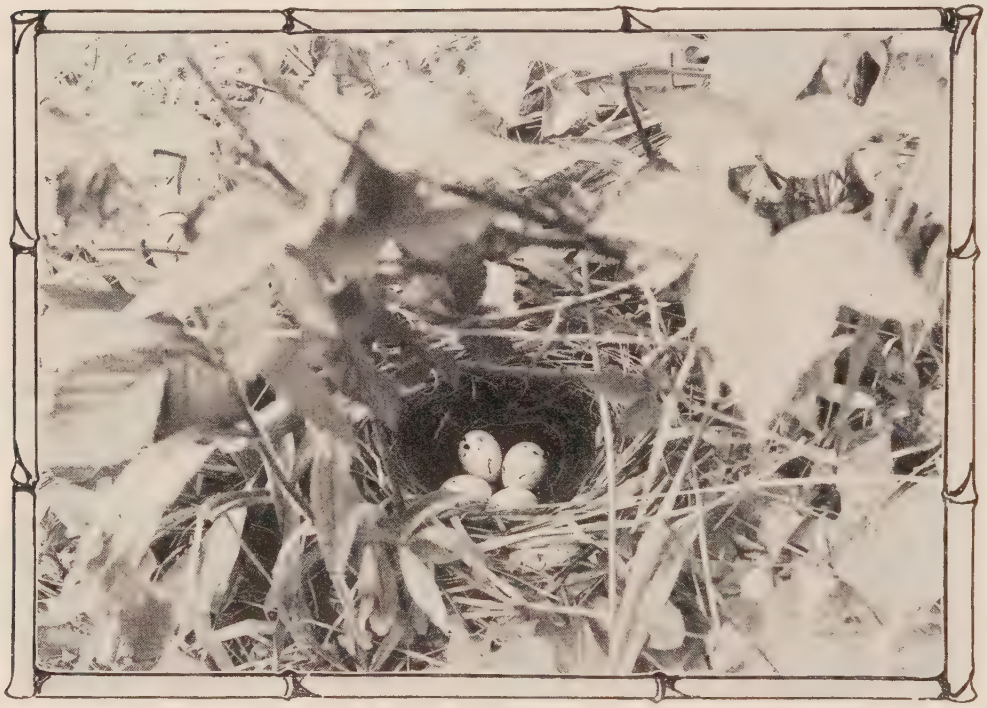
Nest, of grasses, lined with finer grass, rootlets and occasionally horse-hair, on the ground or, rarely, in low bushes or trees. *Eggs*, 3-5, white, pinkish or bluish white, spotted and scrawled in zigzags and scrolls with dark browns or purplish blacks, chiefly at the larger end. Av. size, .82 x .65 (20.8 x 16.5).

General Range.—Southern Ontario, and Mississippi Valley region, from Ohio, Illinois and Michigan to the Plains, south to southern Texas and northwestern Alabama. Accidental near Atlantic Coast.

Range in Ohio.—Not common summer resident in central and southern, rare in northern Ohio. Of local distribution, but probably on the increase.

DUSTY roadsides, sunny pastures and areas of broken ground harbor this plainly colored bird from the time of its late arrival in spring until the young are ready to fly. As the heat of summer increases the birds retire to the seclusion of sparsely wooded pastures or fence-row thickets.

The males sing upon arrival, selecting for this purpose a station upon the summit of some outlying tree. The song is best described in the words of Mr. Ridgway who had ample opportunity to study it in Illinois and the extreme West, and who has done more than anyone else to bring the bird into



Taken near McConnelsville. *Photo by the Author.*

NEST AND EGGS OF THE LARK SPARROW.

well-deserved prominence. He says[1]: "This song is composed of a series of chants, each syllable rich, loud and clear, interrupted with emotional trills. At the beginning the song reminds one somewhat of that of the Indigo Bird (*Passerina cyanea*) but the notes are louder and more metallic, and their delivery more vigorous. Though seemingly hurried, it is one continuous gush of sprightly music; now gay, now melodious, and then tender beyond description,—the very expression of emotion. At intervals the singer falters, as if exhausted by exertion, and his voice becomes scarcely audible; but suddenly

1 "Birds of Illinois," Vol I, p. 262.

reviving in his joy, it is resumed in all its vigor, until he appears to be really overcome by the effort."

This bird more frequently than others is found singing in the middle of the very hottest days in summer. At such times his tremulous song comes to the ear like the gurgling of sweet waters. Next after the Bachman I would accord him the highest place in song among all sparrows.

The accompanying illustration tells the story of nest and eggs perhaps better than words. It is worth while to note that the picture was taken at McConnelsville, in Morgan County, which must be quite near the limit of the bird's present range. Dr. Wheaton first recorded the Lark Sparrow as an Ohio bird in 1861. Since that time it has steadily increased in numbers, altho it is nowhere a common bird.

No. 31.

HARRIS SPARROW.

A. O. U. No. 553. **Zonotrichia querula** (Nutt.).

Synonym.—Hooded Crown Sparrow.

Description—*Adult male*: Crown, face, and throat jet black; sides of head ashy white; breast and below white; sides, flanks, and crissum with a tawny wash and obscurely streaked; above, brown of various shades, inclining to bay on the nape, decidedly olivaceous on rump and upper tail-coverts; feathers of upper back, scapulars, and wing-coverts black centrally; wings and tail fuscous; bill coral-red. *Female*: Similar but with black of head and throat restricted. *In winter* the plumage of both sexes is toned down by ochraceous wash of upper parts and sides, and the feathers of the crown are bordered narrowly with ashy or buff. Length 6.75-7.75 (171.5-196.9); wing 3.20-3.60 (81.3-91.4); tail 3.30-3.75 (83.8-95.3) (Ridgway).

Recognition Marks.—Chewink size; black hood (especially throat) of adults.

Nesting.—Known only from Bendire's description of a set not certainly identified. *Eggs,* similar in appearance to those of a Cardinal, but smaller.

General Range.—Middle United States from Illinois, Missouri, and Iowa west to middle Kansas and the Dakotas, and from Texas north to Manitoba. Accidental on Vancouver Island and in British Columbia and Oregon.

Range in Ohio.—Accidental; one record, Columbus, Ohio, April 28, 1889, by Mr. J. E. Gould—reported by Mr. Oliver Davie.

FOUR or five of these birds were observed by Mr. Gould as they fed in a thicket in company with White Throated Sparrows (*Z. albicollis*), some two miles north of Columbus. One specimen was secured and presented to Mr. Oliver Davie. It is now in the O. S. U. collection.

The Harris Sparrow appears casually in Illinois and Wisconsin during migrations, but no other instance of its occurrence has been reported from any point further east.

No. 32.

WHITE-CROWNED SPARROW.

A. O. U. No. 554. **Zonotrichia leucophrys** (Forst.).

Description.—*Adult*: Crown pure white, becoming gray behind; lateral crown-stripes meeting in front, and post-ocular stripes, jet black, separated by white stripe beginning at anterior angle of eye; remainder of head, neck all around, and entire under parts slaty gray, darkest on nape, whitening on chin and belly, with a tawny wash on flanks and crissum; back and scapulars brown (burnt umber) edged with gray; rump and upper tail-coverts tawny olivaceous; wings and tail fuscous, the tertials dark-centered with edgings of bay and white; middle and greater coverts tipped with white, forming two inconspicuous wing-bars; rectrices with brown shafts and tawny edgings; bill reddish brown with tip of maxilla black. *Young* of the year have the black of head replaced by deep chestnut, and the white by ochraceo-fuscous or gray; in general darker and browner above than adult. Length 6.50-7.00 (165.1-177.8); av. of seven Columbus specimens: wing 3.14 (79.8); tail 2.90 (73.7); bill .43 (10.9).

Recognition Marks.—Sparrow size; broad white crown and jet black lateral stripes strongly contrasting; throat not definitely nor abruptly white.

Nesting.—Does not breed in Ohio. *Nest,* on the ground or in bushes, of weeds and grasses lined with fine grass. *Eggs,* 4 or 5, pale bluish green, speckled and spotted with reddish brown, chiefly at the larger end. Av. size, .91 x .61 (23.1 x 15.5).

General Range.—North America at large, breeding chiefly in the Rocky Mountains, the Sierra Nevada, and northeast to Labrador. South in winter to the Valley of Mexico.

Range in Ohio.—A regular spring and fall migrant, sometimes lingering into summer; not so common as the next species.

THIS handsome and courtly gentleman, with his no less polished wife, is far more modest than his talents would warrant. Already this season we have leveled the glasses on a hundred heads, only to drop them again and exclaim "White-throat," in a tone of mild disgust. But here at last on the tenth of May, we have come upon a company of the better birds holding court in a long, dense rose-briar thicket, which lines a sheltered fence. Our attention was attracted by a soft, varied whistle of gentle melancholy, a performance which seemed to report correctly the sentiments of the whole party, for it was caught up and repeated at courteous intervals by half a dozen throats.

WHITE-CROWNED SPARROW
Zonotrichia leucophrys
Life-size

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Now there is not a bird to be seen, but an occasional sharp *dzink* is heard in the brush, or a suppressed titter of excitement as two birds jostle in their effort to keep out of sight. We are being scrutinized, however, by a dozen pairs of sharp eyes, and if we are quiet and well-behaved one bird and then another will hop up to a taller branch to see and be seen.

What distinguished looking foreigners they are, indeed, with their white crowns slightly raised and sharply offset by the black stripes which flank them! The bird has an aristocratic air which is unmistakable, and appears to expect deference as his due; so perhaps we ought not to wonder at the royal reserve which shrinks from the contemplated profanation of the vulgar eye.

These birds are thought by Burroughs to bear the proportion of about one to twenty of their White-throated kin during the migrations. They are slow travelers, but not above two or three flocks are to be seen in a season, and there is no suspicion of their tarrying within our borders to breed.

No. 33.

WHITE-THROATED SPARROW.

A. O. U. No. 558. **Zonotrichia albicollis** (Gmel.).

Synonym.—PEABODY-BIRD.

Description.—*Adult male*: Crown black, divided by a pale white median line; an elongated spot in front of the eye above, yellow; remainder of superciliary line white; throat white squarely cut off below; obscure blackish rictal and post-orbital lines; below gray, sordid or slaty on fore-breast, extending up and mingling with brown on cheeks, washed with brownish on sides and flanks; above warm brown inclining to bay, feathers with blackish centers most conspicuous on scapulars and ends of tertiaries; rump tawny-olivaceous or bister; wings and tail fuscous-edged and tinged with bay or tawny; edge of wing yellow. *Adult female*: Similar to and not always distinguishable from male, but usually duller; black of head with admixture of brown; loral spot paler; white of throat restricted and sordid, or flecked with dusky. *Young*: Still duller and browner; the throat sometimes scarcely distinguishable from the sordid under parts. Length 6.75 (171.5); wing 2.90 (73.7); tail 2.70-3.00 (68.6-76.2); bill .43 (10.9).

Recognition Marks.—Sparrow size; yellow above lores and on edge of wing; white throat-patch; narrow median crown stripe, as distinguished from *Z. leucophrys*.

Nesting.—Not known to breed in Ohio. "*Nest*, of coarse grasses, rootlets, moss, strips of bark, etc., lined with finer grasses, on the ground or in bushes. *Eggs*, 4 or 5, bluish white, finely and evenly speckled, or heavily and irregularly blotched with pale rufous brown. Av. size, .82 x .60 (20.8 x 15.2)" (Chapman).

General Range.—Eastern North America, west to the Plains, north to Labrador and the Fur countries. Breeds from the northern tier of states northward, and winters from Massachusetts southward.

Range in Ohio.—An abundant spring and fall migrant. Winters in large numbers in the extreme southern part of the state.

BOTH in spring and fall immense numbers of these Sparrows pursue a leisurely course through our state, while the southern quarter of it conveniently marks the northern limit of their winter distribution.

Brush-piles, the tops of fallen trees, and the thickets of second-growth clearings furnish rendezvous for little companies of from twenty to a hundred of these birds. Here they scratch among the fallen leaves, kicking absurdly with both feet, after the fashion of Towhee, or else cull clammy sweets of slug and bug from rotting logs.

The greater part of the day is spent in seclusion, resting and recuperating for or from the long journey, but like all birds, except Owls, they are quite active in the early morning. In common with the Owls, however, they enjoy the evening hours. As the sun begins to sink in the west, the White-throats gather from scattered pastures to indulge a game of tag, chasing each other about with merry calls and cries, or stopping now and then to snatch a last morsel of food. As the shades of twilight deepen they bestow themselves for the night in some chosen thicket, not without much jostling and sniggering, quite like healthy children after a romp.

Being a sociable bird White-throat makes frequent use of a penetrating *tseep,* by which to trail his companions through the brushy mazes. They have also a metallic *chink,* still sibilant—if such a combination may be conceived—to express alarm and protest. In springtime the song proper is perfected, as we suppose, before the birds leave for the higher latitudes. It consists normally of six drawling, mournful, whistled notes, of which the last three or four have a slightly tremulous quality. The initiatory note is either much lower or a little higher than the others, which are given on one key or else descend by fractional tones. The whole may be represented as, *Oh dear, dear, de-e-ear, de-e-ear, de-ear,* or, *Hoo, he-ew, he-ew, he-e-e-ew, he-e-ew, he-e-ew.* Most western writers, when consulted upon this point, dutifully repeat the tradition, said to have originated in New England, that the bird says "*Peabody, peabody, peabody,*" and hence is properly called the Peabody Bird. One cannot predict what may happen further north or east, but I lift the voice of one crying in the wilderness that the bird does not utter anything remotely resembling the word Peabody while in Ohio.

No. 34.

TREE SPARROW.

A. O. U. No. 559. **Spizella monticola** (Gmel.).

Description.—*Adult*: Crown bright chestnut, bordered by broad gray superciliary line; obscure chestnut streaking on side of head on gray ground; above, feathers of back black with rufous and flaxen edgings; scapulars, greater coverts, and outer webs of secondaries broadly edged with rufous; middle and greater coverts tipped with white, forming two fairly conspicuous wing-bars; remainder of wing and tail blackish, edged with whitish; below gray, slaty, or sordid white; a partially concealed dark spot in center of breast; a chestnut patch on side of the breast; sides and flanks tawny in varying proportions; bill blackish above, yellow below, with dark tip. *In winter specimens,* the chestnut of crown is slightly veiled centrally by ashy, and the chestnut on the sides of the breast variously distributed or almost dispelled. Av. of six Columbus specimens: Length 6.00 (152.4); wing 2.96 (75.2); tail 2.57 (65.3); bill .37 (9.4).

Recognition Marks.—Warbler size, but stockier; chestnut crown and rufous tone of upper parts; white wing-bars; partially concealed dusky spot on breast; gregarious habits, in winter.

Nesting.—Does not breed in Ohio. "*Nest,* in low bushes or on the ground, loosely constructed of bark strips, weeds and grasses, warmly lined with feathers. *Eggs,* 4-6, or even 7, pale green, minutely and regularly sprinkled with reddish brown spots" (Coues.). Av. size, .75 x .60 (19.1 x 15.2).

General Range.—Eastern North America, west to the Plains, and from the Arctic Ocean south in winter, to the Carolinas, Kentucky, and eastern Kansas. Breeds north of the United States east of the Rocky Mountains.

Range in Ohio.—Abundant in winter, especially northerly.

THE sight of the first Tree Sparrow in the fall serves perfectly to call up a vision of impending winter. Here are the hurrying blasts, the leaden skies, the piling snow-drifts, all ready to make the beholder shiver. But here, too, in some unburied weed-patch or thicket of rose-briars, is a company of Tree Sparrows, stout-hearted and cold-defying, setting up a merry tinkling chorus, as eloquent of good cheer as a crackling Yule-log. How many times has the bird-man hastened out after some cruel cold snap, thinking, "Surely this will settle for my birds," only to have his fears rebuked by a troupe of these hardy Norsemen reveling in some back pasture as if they had found their Valhalla on this side the icy gates. Ho! brothers! here is food in these dainty capsules of mustard or mallow; here is wine distilled from the rose-hips; here is shelter in the weedy mazes, or under the soft blanket of the snow. What ho! Lift the light song! Pass round the cup again! Let mighty cheer prevail!

The Tree Sparrow is easily the most abundant bird in the state during winter. A half day's ramble in the northern part will discover from three

to a dozen flocks of them, varying in numbers from a dozen to three or four hundred each. In the nature of the case their food is found near the ground, consisting as it does of weed-seed and dried berries; and so, for the season, the name Tree Sparrow seems inconsistent. When persistently annoyed, however, the flock will rise to the tree-tops in straggling fashion, and either await the disappearance of the enemy or make off through the trees at a good height. The warm days of early spring, too, bring out their true character. Some of the males mount the trees at various heights to tune up for the spring concert season, while the more frivolous play at tag among the branches, dashing about with a recklessness which causes one to open his eyes in astonishment, if he has known the birds before only as babbling and slow-flitting seed-gatherers.

The song of the Tree Sparrow is unusually sweet and tuneful, affording a pleasing contrast to the monotonous ditty of the Chipping Sparrow. Snatches of song may be heard, indeed, on almost any mild day in winter, but the spring awakening assures a more pretentious effort. A common form reminds one somewhat of Towhee's Sunday-go-to-meeting best, but the notes are much finer and of most flattering tenderness, *Swee-ho, sweet, sweet, sweet.* There is in it also just a touch of Goldfinch's rollick.

By the middle of April all but a few stragglers of the "Winter Sparrow" host have left for their homes in the distant north. Dr. Wheaton, however, quotes Mr. M. C. Read as saying, "A few remain and spend the entire year with us; have raised them from the nest." The statement is explicit and comes from one of the trusted authorities of the early days. There is nothing left for us but to whistle softly and exclaim, "How *very* unusual!" Certain it is that Tree Sparrow has not repeated the indiscretion during the fifty years or more since Mr. Read's time.

No. 35.

CHIPPING SPARROW.

A. O. U. No. 560. **Spizella socialis** (Wils.).

Synonyms.—CHIPPY; HAIR-BIRD.

Description.—*Adults*: Forehead black divided by short gray line; crown chestnut flecked with black behind; a gray line over eye, and a black line through it; entire under parts ashy-gray, unmarked; back separated from head by gray of nape, strongly streaked by black, pale rufous, and ochraceous; wings and tail fuscous, edged with whitish; bill black; feet pale. *Immature* birds have bill yellow below; the chestnut of crown mixed with black; and a buffy suffusion of breast and sides in varying proportions. Very young birds are streaked below. Length 5.00-5.50 (127.-139.7); wing 2.75 (69.9); tail 2.37 (60.2); bill .36 (9.1).

Photo by J. B. Parker.

WHO GETS THE WORM?—A CHIPPING SPARROW FAMILY.

Recognition Marks.—Warbler size; blackish forehead and chestnut crown; song a monotonous trill.

Nest, a compact structure of fine twigs, grasses, and (most commonly and often exclusively) rootlets, heavily lined with horse-hair; placed anywhere in bushes or small trees, but preferably on horizontal branches of apple-trees or evergreens. *Eggs,* 4 or 5, greenish blue, speckled freely or narrowly about the larger end with reddish brown or black. Av. size, .71 x .51 (18. x 13.).

General Range.—Eastern North America, west to the Rocky Mountains, north to Great Slave Lake, and south to eastern Mexico, breeding from the Gulf States northward.

Range in Ohio.—A common, and universally distributed summer resident. Sparingly resident in winter in southern portion.

WHO has not seen this little pensioner of doorstep and lawn? Wilson was quite correct in naming him *socialis,* sociable; the more so if the word be not construed in its ordinary sense of gregarious, but made to witness to the bird's preference for human society. The Chipping Sparrow hops fearlessly about our yards in search of food, or flutters up with a load of nesting material, from our very feet, not with brazen impudence like the English Sparrow, but with the quiet confidence of a trusted friend. No bird is more likely than he to accept the proffered hospitality of honeysuckle vine or trellis, and instances are beyond number where the gentle "Chippy" has been coaxed to eat from the hand.

Of all homely sounds the monotonous trill of the Chipping Sparrow is the most homely—and the most easily forgivable. As music it scarcely ranks above the rattle of castanets, but the little singer pours out his soul full earnestly, and his ardor leads him to sustained effort throughout the sultry hours when more brilliant vocalists are sulking in the shade; and for this we come to prize this homely ditty like the sound of plashing waters. It is the Chipping Sparrow too that may usually be depended upon to open the morning chorus at about 3:15, and that were service enough to endear him to the heart of the ornithologist.

Taken in Fairfield Co. *Photo by the Author.*

CHIPPING SPARROW'S NEST IN APPLE TREE.

Chippy's nest is a frail affair at best, but often most elaborately constructed of rootlets and fine grasses and plentifully lined with horsehair. In many instances the

last named material is exclusively employed, and Dr. Wheaton mentions two nests composed entirely of white hair. A horizontal branch of an apple tree is a common situation, but nests are placed in evergreens and other shade trees, or in hedge-rows and the like. They are often so loosely related to their immediate surroundings as to give the impression of having been constructed elsewhere and then moved bodily to their present site. Some are set as lightly as feathers upon the tips of evergreen branches, and a heavy storm in season is sure to bring down a shower of Chippies' nests.

Dr. Brewer in his monumental work[1] states emphatically that in no instance has he known of the Chipping Sparrow's nest on the ground. Yet Dr. Wheaton mentions such an instance, and in the spring of 1903 I came upon a nest with one egg, in the very shadow of an apple-tree, indeed, but thoroughly settled upon the ground under the protection of a grass-tussock.

Photo by J. B. Parker.

PLEASE, FATHER, I WANT SOME GRUB.
THE FEMALE IS BROODING THE FLEDGELINGS ON A VERY WARM DAY, BUT ONE YOUNGSTER IS HUNGRY AS WELL AS HOT.

Chipping Sparrows are devoted parents, and raise at least two broods each season. Their fidelity to their young and their confidence in man make them frequent subjects of the photographer's skill, and their portraits are among the most pleasing in collections.

The Cowbird finds these gentle creatures among her easiest victims. After the dusky changeling has stifled or ejected the rightful heirs, he usurps the full attention of his foster parents, and one of the saddest sights to see in the bird-world is that of a mother Chippy, slender and care-worn, standing on tiptoes to cram food into the mouth of some squawking, pot-bellied, cuckold squab of twice her size.

1 North American Birds, Baird, Brewer & Ridgway; Land Birds, Vol. II., p. 10.

No. 36.

FIELD SPARROW.

A. O. U. No. 563. **Spizella pusilla** (Wils.).

Description.—*Adults*: Crown dull chestnut with a slight admixture of ashy gray; auriculars bordered with chestnut; nape gray; feathers of back rufous with black central streaks and buffy edgings; wings dusky, the primaries edged with whitish and the rest with rufous, the middle and greater coverts tipped with white, forming two inconspicuous bars; tail fuscous; below ashy gray, unmarked save for slight brownish suffusion of breast and flanks; bill pale reddish; feet pale. Length 5.25-5.75 (133.3-146.1); wing 2.57 (65.3); tail 2.05 (67.3); bill .36 (9.1).

Taken near Oberlin. *Photo by the Author.*

FIELD SPARROW'S NEST IN GRASS CLUMP.

Recognition Marks.—Warbler size; crown *not* bright chestnut; bill uniform pale reddish; unmarked below. This bird has few positive marks, and is oftenest "sensed," or determined by elimination.

Nest, in low bushes or on the ground, a neat but simple structure of dried grasses, sometimes, but rarely, lined with horse-hairs. *Eggs,* 3-5, white, bluish- or pinkish-white, with numerous small spots of reddish brown, generally distributed or gathered loosely about larger end. Av. size, .70 x .51 (17.8 x 13.).

General Range.—Eastern United States and southern Canada, west to the

Plains, south to the Gulf States and Texas. Breeds from South Carolina, southern Illinois, and Kansas northward.

Range in Ohio.—Common summer resident.

OF plainer appearance even than the Chipping Sparrow, this humble wayside bird excels in song. Its trill is generically related to that of the other bird, but its notes are purest music. *Tew, tew, tew,*—the first three or four notes come full and clear, but then comes a rapid accelerando through which they swiftly pass into a delicious trill, and so fade out. The tones are tender and sweet, and possess a subtle spiritual quality which lifts them out of the realm of common things. One never quite gets over wondering at the excessive plainness of the singer in contrast with the exalted sentiment he utters. It is as tho a clod took voice and a soul escaped in song.

Within certain pretty clearly defined limits the Field Sparrow's song is capable of great individual variation. Thus it becomes comparatively easy to distinguish a half dozen birds in a field by their songs alone. In some the opening notes are prolonged, as, *Heew, he-ew, he-ew, he-ew, hew, hew, hew, heheeeeee.* In others they are distinctly doubled and have the accent transferred to the second syllable, *Tu-eet', tu-eet', tu-eet', tu-eet', weet, weet, weet,* TR. One individual heard in August differed from all others in the neighborhood in having such a double note, *Cher-ié, cher-ié, cher-ié, tew, tew,* etc. The following spring the singer returned to the same station, and two others about a hundred yards away developed the same peculiarity. It is fair to suppose that these last were children of the first.

Photo by the Author.

A NESTING SITE.

THE NEST SHOWN IN THE PRECEDING ILLUSTRATION OCCUPIES A CENTRAL POSITION IN THE MAIN TUSSOCK.

A bushy pasture or undergrowth flanking the woods affords a suitable refuge for the Field Sparrow, or else it finds lodgment along over-grown fences and in the ephemeral sprouts which line the road. The bird is rather shy and retiring, neither seeking the haunts of men nor courting observation in its bushland haunts.

According to Dr. Howard Jones, "The nests seem to be about equally divided between the ground and the bushes. When in the former position a little depression is chosen and the structure is neatly fitted into it with the rim about level with the surrounding earth. When in the latter position it is placed in any arrangement of twigs that will support it; it is not built about and cabled to them as is the nest of the Summer Warbler, but it is simply loosely arranged upon the stems or wedged in among them so that it will not topple over, and nearly always it can be lifted out without tearing it in the least. It is seldom if ever over five feet from the ground, and commonly is within two or three." Occasionally a nest is taken from the growing grass, which is so complete in itself and so little adjusted to its surroundings that it looks as if it might have been dropped there by a careless hand.

In construction the nest is simple, but loose or compact according to the skill of the owner. The illustration shows one of the best quality, compactly built and plentifully supplied with horse-hair lining. Another taken the same season from a clump of "suckers" seven feet high on the trunk of an apple tree, was as flimsy as a Grosbeak's, a mere wisp of twisted grasses which held up four eggs to easy inspection from below.

No. 37.

SLATE-COLORED JUNCO.

A. O. U. No. 567. **Junco hyemalis** (Linn.).

Synonyms.—Snow-bird; Eastern Snow-bird.

Description.—*Adult male in summer*: Upper parts, throat and breast slaty black, the bluish tinge lacking on wings and tail; below, abruptly white from the breast, the flanks ashy slate; the two outer pairs of tail-feathers entirely, and the third pair principally white; bill flesh-color, usually tipped with black. *Adult female*: Similar to male; throat and breast paler; a brownish wash over the upper parts, deepest on nape and upper back; wings brownish fuscous rather than black, and sides tawny-washed. *Adult male in winter,* becoming like female, but still distinguishable. Length 6.00-6.50 (152.4-165.1); wing 3.07 (78.); tail 2.80 (71.1); bill .49 (12.5). Female averages slightly smaller than male.

Recognition Marks.—Sparrow size; slaty or brownish black and white contrasting; white lateral tail-feathers.

Nest, on the ground, usually under cover of a protecting root, log or the like, composed of grasses, roots and trash, lined with fine grass or hair. *Eggs,*

4 or 5, white or greenish white, speckled freely with reddish and dark brown. Av. size, .77 x .58 (19.6 x 14.7).

General Range.—North America, chiefly east of the Rockies, breeding in the hilly portions of the Northern States northward. South in winter to the Gulf States.

Range in Ohio.—Abundant winter resident. Possibly breeds sparingly (formerly "in great numbers."—Kirtland) in northeastern part of state.

A summer in Laurentia is certainly good for the health, for when Junco returns in the fall he is chock-full of animal spirits and good cheer. He is a very energetic body at any time of year, but his high spirits are especially grateful to the beholder when the numbing cold of winter has silenced all feathered kind but the invincible Tree Sparrows and Snow-birds. The plumage of the Junco exactly matches his winter surroundings—"Leaden skies above; snow below," Mr. Parkhurst says—and he proceeds to make himself thoroughly at home. Not content to mope about within the limits of a single brush-patch, like Tree Sparrows, large companies of Snow-birds rove restlessly through tree-tops and weedy dingles as well, and cover considerable areas in a day.

On such occasions, and commonly, they employ a peculiar twitter of mingled greeting and alarm,—a double note which escapes them whenever any movement of wing is made or contemplated. I have called this the "banner" note, partly because it is uttered when the bird, in rising from the ground or fluttering from twig to twig, displays the black and white banner of its tail, and partly because it sounds like the double clank-clank of a railroad switch when the heavy trucks pass over it. The connection between a banner and a railroad switch may not be perfectly obvious at first, but anyone who is not color-blind is hereby respectfully challenged to forget if possible the lurid colors which decorate the average assemblage of militant switch-posts.

Junco, while a very reckless fellow to appearance, is not indifferent to the comfort of well-appointed lodgings. His nights are spent in the thickest cover of cedar hedges, under logs or sheltered banks, along streams, or else buried in the recesses of corn-shocks. One crisp November evening a year or two ago, with my ornithological chum, Mr. Lynds Jones, I watched a company of Juncoes to bed. The birds would steal along from shock to shock with titters of inquiry until they found an empty bed or one to their taste, and then would settle well down into the top, not without considerable rustling of dry leaves. When the company was quiet, we started out, boy-like, to undo the work. We saluted the shocks in turn with distantly flung clods which shivered to powder as they struck the stalks and made a noise like the Day of Judgment. Out dashed the Juncoes by twos and threes from every shock thus rudely assaulted, and many were the pertinent remarks made in most emphatic Junkese when the mischief-makers were discovered. Oh,

Taken in Columbus.

WHERE JUNCO SLEEPS.

Photo by the Author.

well, they really wer'n't scared quite out of their wits, and they had plenty of time to get back into bed after we were gone. Besides, variety is the spice of life —even of a Snowbird's. But the boys! Say, Jones, how old are you, anyway?

When the first warm days of March bring up the Bluebirds and the Robins, the Juncoes get the spring fever. But they do not rush off to fill premature graves in the still snowy north. The company musters instead in the tree-tops on the quiet side of the woods, and indulges in a grand eisteddfod. I am sure that the birds are a little Welch and that this term is strictly correct. All sing at once a sweet little tinkling trill, not very pretentious, but tender and winsome. Interspersed with this is a variety of sipping and suckling notes whose uses are hard to discern. Now and then also a kissing note, of repulsion instead of attraction, is heard, such as is employed during the breeding season to frighten enemies. During the progress of the concert some dashing young fellow, unable fully to express his emotion in song, runs amuck and goes charging about through the woodsy mazes in a fine frenzy, without, however, quite spilling his brains. Others catch the infection, and I have seen a score at once in a mad whirl of this harmless excitement.

Juncoes linger surprisingly late sometimes, well on into April or even

May. Perhaps this is because they are so near the southern limit of their breeding range that they cannot be sure they care to move. The birds are said to breed still in the wilder portions in the northeastern part of the state, but of this I have no certain knowledge.

No. 38.

BACHMAN SPARROW.

A. O. U. No. 575a. **Peucæa æstivalis bachmanii** (Aud.).

Description.—*Adulis*: Above bluish gray streaked with dark chestnut or bay; back, usually, with a few black streaks centrally; wings and tail fuscous with various edgings of gray, rufous or white; loral area and line over eye buffy, becoming gray behind; a narrow ashy or whitish median line more or less distinct or obsolete (according to season?); below gray, washed with brownish or dingy buff, the overcast being heaviest on breast and sides; edge of wing yellow; bill horn-color, darkest above; feet light brown. *Young* in first plumage are streaked on breast. Length 5.50-6.25 (139.7-158.8); wing 2.45 (62.2); tail 2.60 (66.); bill .56 (14.2).

Recognition Marks.—Warbler to sparrow size; mixed bay and gray of upper parts. To be carefully distinguished from the Field Sparrow by its larger bill, and more distinct buffy suffusion of breast, etc.

Photo by the Author.

Taken in Cincinnati. A HAUNT OF THE BACHMAN SPARROW.
IT IS HERE THAT THE SPECIMEN REFERRED TO IN THE TEXT WAS TAKEN.

Nest, usually described as a domed cylinder of dried grasses, on the ground (but see fuller account below). *Eggs,* 3-4, pure white. Av. size, .75 x .60 (19.1 x 15.2).

General Range.—The Carolinas and Gulf States north to southern Illinois, Indiana and Ohio. Florida in winter.

Range in Ohio.—Rare, but probably on the increase southerly; only recently noted: Columbus, by C. M. Weed; Portsmouth, by W. F. Henninger, April 23, and May 6, 1897; Cincinnati, by Miss Laura Gano, April 25, 1901; etc.

IT is very gratifying to be able to report the recent invasion of the state by this delightful vocalist from the south. To Rev. W. F. Henninger, then of Scioto County, belongs the honor of first discovery. A specimen was secured by him near South Webster, April 23, 1897, but it was, unfortunately, not preserved. On April 23, 1903, the author in company with Miss Laura Gano and a party of scientists, took a singing male on Rose Hill, Cincinnati, and the specimen is preserved in the Cincinnati Museum of Natural History. On the following day three others in full song were found upon another of those beautiful wooded hills for which the Queen City is justly famous. These last, I rejoice to say, were not sacrificed even in the name of science. Miss Gano first noted the species at Cincinnati, April 25, 1901, and had seen it on at least two occasions since.

Taken near Sugar Grove. *Photo by the Author.*
TUMBLE-DOWN FENCES ARE ALSO FAVORITE RESORTS.

Later in the same season, June 10th and 11th, I came upon the Bachman Sparrow upon one of the hills near Sugar Grove, in Fairfield County. A nest was found in a clover field, which, altho deserted at the time, belonged upon the strongest presumptive evidence to this bird. One of

the young birds was easily caught and its picture taken both in the hand and in the nest, as shown in the accompanying illustrations. A few days later Ralph and Will Bumgardner took a set of four eggs from the ground in the same meadow. The eggs were pure white and could hardly have belonged to any other than this species.

The song of the Bachman Sparrow is a thing of surpassing beauty. In delivering it the bird chooses a prominent station at the top of weed-stalk, fence-post, or sapling, or stands well out on a bare limb of a tree. Here he throws his head back and draws, as it appears, a full breath, in a note of ravishing sweetness; then sends it forth again in a tinkling trill of uniform or varied notes. Nothing can excel the fine poetic rapture of the inspirated note. It sets the veins a-tingle and makes one wish to put his shoes from off his feet. The characteristic opening note is given with constantly varying pitch and intensity. Sometimes it sounds like a dream voice floating gently from the summer land of youth, and again it vibrates with startling distinctness like a present call to duty. Occasionally a dainty trill is substituted for this inspired and inspiring opening, while the remainder of the song may consist of a half dozen notes precisely alike, or of a succession of groups three or four in number. There is a soulful quality, an ethereal purity, and a caressing sweetness about the whole performance which makes one sure the door is opened into the third heaven of bird music.

Taken near Sugar Grove *Photo by the Author.*

A NEST SITE.

THE NEST MAY BE MADE OUT WHERE THE PRINCIPAL STALKS IN THE FOREGROUND CONVERGE.

Once as I sat entranced before this new found Orpheus a Lark Sparrow broke into song at half the distance. In pained astonishment and wrath I turned upon him—him even! "Oh, please not now! Mon enfant! Please not now!"

Photo by the Author.

Taken near Sugar Grove.

A YOUNG BACHMAN SPARROW.

No. 39.

SONG SPARROW.

A. O. U. No. 581. **Melospiza cinerea melodia** (Wilson).

Synonym.—SILVER-TONGUE.

Description.—*Adult*: Crown dull bay with black streaks, divided by dull gray line; superciliary stripe of lighter gray; rufous-brown post-ocular and rictal stripes, enclosing grayish brown auriculars; remaining upper parts reddish brown, varied on scapulars, inter-scapulars, and inner quills by blackish centers and grayish edgings; wing-quills fuscous, broadly edged with rufous; tail rufous with dusky shafts and often obscure transverse barring of dusky; below, white or sordid, heavily streaked on sides of throat, breast and sides by black and rufous; markings wedge-shaped, confluent on sides of throat as maxillary stripes, and often on breast as indistinct blotch, elongated on sides and flanks; bill horn-color above, lighter below; feet pale brown. The streaking both above and below is sharper and heavier in summer and fall than in spring, due to the wearing away of the white or rufous edgings. Individual variations are quite marked, but always conform to the general pattern. Length about 6.30 (160.); av. of five Columbus specimens: wing 2.59 (65.8); tail 2.61 (66.3); bill .47 (11.9).

Recognition Marks. — Sparrow size; the heavy streaking of breast and back is distinctive.

Nest, a bulky mass of dead leaves, twigs, grasses, etc., lined with fine grass, rootlets, and sometimes horse-hair; placed indifferently in bushes or on the ground. *Eggs,* 4-6, greenish-, grayish-, or bluish-white, heavily spotted and blotched with reddish browns which often conceal the background. Av. size, .80 x .59 (20.3 x 15.).

General Range.—Eastern United States to the Plains, breeding from Virginia and the southern portion of the Lake States to the Fur Countries.

Range in Ohio.—Of universal distribution; abundant during breeding season save in southern portion. Resident in middle and southern, and sparingly resident in northern Ohio.

Photo by J. B. Parker.
SILVER-TONGUE.

THERE are those who do not know the Song Sparrow by sight or by name, but surely there are none, even tho dwellers in "sky-scrapers," who have not at some time in their lives heard the sweet strain of this modest bird. Scattered as it is throughout the length and breadth of our land, along the fence-rows and in the lowland thickets, but especially in the backyard shrubbery, unfortunate indeed must be the boy or girl who has not been cheered and made better, if only subconsciously, by this tender minstrel of common life. Perched upon some post or bush, he greets his childish listeners with "*Peace, peace, peace be unto you, my children.*" And that is his message to all the world, "Peace and good will."

Silver-tongue's melody is like sunshine, bountiful and free and ever grateful. Even in winter the brave-hearted bird avails himself of the slightest pretext,—an hour of sunlight or a rise of temperature—to mount a bush and rehearse his cheerful lay. The song is not continuous, but it is frequently repeated through periods of several minutes, and at intervals of nine or ten seconds. But there! Who could hope to sum up all the commonplace poetry and fond enspiriting of Silver-tongue's music by an estimate of intervals and seconds! It is of the soul and one of the most sincere things in nature.

Taken near Tiffin. *Photo by Rev. W. F. Henninger.*

A GROUND NEST OF THE SONG SPARROW.

But no matter how gentle a bird's disposition may be, there is ample use, alack! for the note of warning and distrust. Song Sparrow's scolding note, a single *chip* or *chirp*, is more musical than some, but still very earnest. In winter the resident birds deny themselves even this characteristic cry, and except for the occasional outbursts of full song, they are limited to a high nasal *tss*, quite indistinguishable from that of the Tree Sparrow, with which they are more or less associated through similarity of haunts. Song Sparrows are not really gregarious birds, but a wayside swamp which attracts one pair is as likely to support a dozen, while

the northward moving host spreads over the northern part of the state about the middle of March in such numbers as to leave each bird well within cry of a score of his fellows.

Silver-tongue is a bird of the ground and contiguous levels. When hiding he does not seek the depths of the foliage in trees, but skulks among the dead leaves on the ground, or threads his way through brush piles. If driven from one covert the bird dashes to another with an odd jerking flight, working its tail like a pump-handle, as tho to assist progress. Ordinarily the bird is not fearful, altho retiring in disposition. Occasionally, however, one sneaks so persistently or flies so wildly as to attract undesirable notice, and unconsciously to set a price upon his own head. If Red-eyed Vireos and Song Sparrows would remember *always* to look natural, their sorrowing friends would not need to bewail the day of impulsive collectors.

Photo by J. B. Parker.

GENTLE MINISTRATIONS.

IT IS A WARM DAY AND THE FEMALE SONG SPARROW IS BROODING HER YOUNG TO PROTECT THEM FROM THE BURNING SUN; WHILE THE MALE FROM TIME TO TIME BRINGS FOOD FOR MOTHER AND CHILDREN.

The question of food supply is least troublesome to a bird of this type. If an oft-repeated adage is correct, the Sparrow's diet must be reckoned very spicy. Seeds of many sorts,—but no large proportion of grain,—beetles, bugs, slugs and worms form the bulk of its food. I have even seen the bird catch minnows at the edge of a stream, while water insects of several sorts contribute their share of unquestionable spice.

In a season of all around nesting, about one-fifth of the nests found will be those of the Song Sparrow. This is because the bird nests everywhere at lower levels, and because it raises two or three, or sometimes four, broods in a season. The period of incubation is twelve days, and the young are ready to leave the nest in as many more. They do not require much care after they are

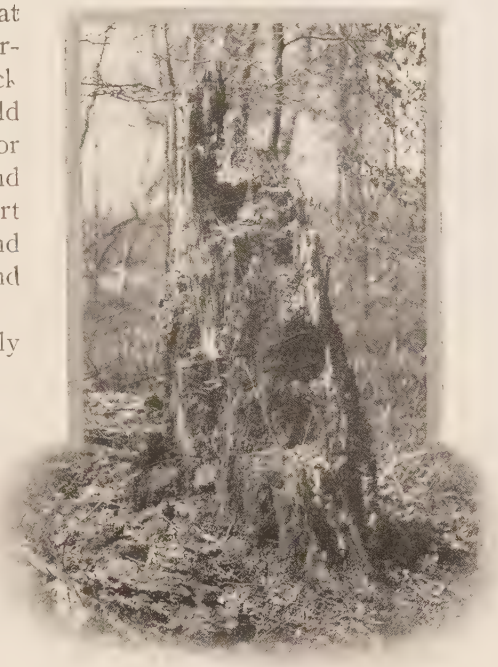
full grown, altho the parent birds, especially the father, may exercise some slight supervision over them, even while busy with a second nest.

Taken in Columbus. *Photo by O. E. Jennings.*

SONG SPARROW'S NEST IN FERN.

At this rate we should be overrun with Song Sparrows if there were not so many agencies to hold the species in check. A young Song Sparrow

is the choice morsel of everything that preys,—cats, skunks, weasels, red squirrels, hawks, crows, jays, shrikes, black snakes, and garter snakes. How would this motley company fare, were it not for the annual crop of Song Sparrows? And the wonder of it is that the brave heart holds out, and sings its song of trust and love with the wrecks of three nests behind it, and the harvest not yet past.



Taken near Licking Reservoir. Photo by the Author.

AN UNUSUAL NESTING SITE.

A NEST CONTAINING FOUR EGGS OCCUPIES THE UPPERMOST NICHE IN THE STUMP.

The nest of this species is usually carefully constructed of weed-stalks, vegetable fibers, and grasses, with dead leaves and trash in endless variety. It is deeply cup-shaped, with a rim neatly turned, lined with fine grasses, grass-stems or horse-hair. Probably more than half are upon the ground, sunk flush with the surface or bedded in trash, commonly under the protection of root, stick, or grass tussock. Half as many more occupy grass tussocks at some distance from the ground; while the remainder are placed in briar tangles, fence-corners, declining limbs of trees, forks of trees, etc. On two occasions I have found nests occupying little caves in the punk of decayed stumps. Others appear in tussocks of saw grass, entirely surrounded by water. Cattails are a favorite place. One female in a ground nest regularly required about three seconds in which to extricate herself from the tangle of her own ingenuity. Another chose a retreat underneath a chance limb which a wind had blown down upon a perfectly smooth woodland lawn. The nest shown in the illustration on the preceding page was found placed in the center of a spreading fern in a green-house on the Ohio State University grounds, and the young were successfully raised. In short, there is no place out of doors, or nearly so, where a man with his feet planted on the soil may not expect to find a Song Sparrow's nest.

No. 40.

LINCOLN SPARROW.

A. O. U. No. 583. **Melospiza lincolnii** (Aud.).

Synonym.—LINCOLN'S SONG SPARROW.

Description.—*Adults*: Above, like preceding species, but crown brighter rufous, and with more decided black markings; back browner and more broadly and smartly streaked with black; the gray of back sometimes with a bluish and sometimes with an olivaceous tinge; below, throat and belly white, the former never immaculate, but with small arrow-shaped black marks; sides of head and neck and remaining under parts creamy buff, everywhere marked by elongated and sharply defined black streaks; bill blackish above, lighter below; feet brownish. Length about 5.75 (146.1); av. of six Columbus specimens; wing 2.48 (63.); tail 2.11 (53.6); bill .40 (10.2).

Recognition Marks.—Sparrow size; bears general resemblance to Song Sparrow, from which it is clearly distinguished by buffy band, and narrow, sharp streaks of breast.

Nesting.—Does not breed in Ohio. "Nesting like that of the Song Sparrow, and eggs not distinguishable with certainty" (Coues).

General Range.—North America at large, breeding chiefly north of the United States (as far north as Fort Yukon) and in the higher parts of the Rocky Mountains and Sierra Nevada; south in winter to Panama.

Range in Ohio.—Not uncommon spring and fall migrant, but seldom observed because of extreme shyness.

MODESTY is a beautiful trait and I suppose if we had always to choose between the brazen arrogance of the English Sparrow and the shy timorousness of this bird-afraid-of-his-shadow, we should feel obliged to accept the latter. But why should a bird of inconspicuous color steal silently through our woods and slink along our streams with bated breath as if in mortal dread of human eye? Are we such hobgoblins?

The first and only day in Ohio that I ever saw this bird, two of us followed a twinkling suspicion along a shady woodland stream for upwards of a hundred yards. Finally we neared the edge of the woods. There was light! exposure! recognition! With an inward groan the flitting shape quitted the last brush-pile and rose twenty feet to a tree-limb. Just an instant—but enough for our purpose—and he had whisked over our heads and was hot-wing over the dusky back trail. That same day we came again upon a little company of them, halted by the sight of the great north water, and tarrying for the day in the dense thickets which skirted a sluggish stream emptying into Lake Erie. Here they were skulking like moles, in spite of the bright sunshine and fragrant air. Finally by working along one on each side of the creek, we succeeded in "cutting out" a single bird. First Mr. Jones forced him to the water's edge (always along the ground) and from across the stream

I noted eagerly his head-stripes, similar to those of a Swamp Sparrow, his pale streaked breast, and his very demure airs. Then I retired while Mr. Jones put him across the creek, where I held him for my companion to study. During this whole manœuver the bird favored us now and then with a few delicate snatches of a sweet but very weak song. Is it any wonder that the Lincoln Sparrow is so little known to fame?

Further west the case is somewhat different. Mr. Trippe in writing of the birds of Colorado, says, "Lincoln's Finch is abundant and migratory. It breeds from about 9,500 or 10,000 feet up to the timber line. It arrives at Idaho Springs early in May, and soon becomes very common, haunting the thickets and brush-heaps by the brooks, and behaving very much like the Song Sparrow. During the breeding season it is most abundant among the bushes near and above timber line, nesting as high as it can find the shelter of willows and junipers. Reappearing in the valleys in October, it lingers by the streams for a few weeks and then disappears."

No. 41.

SWAMP SPARROW.

A. O. U. No. 584. **Melospiza georgiana** (Lath.).

Description.—*Adult*: Forehead black; crown and occiput rich chestnut, bordered posteriorly with blackish streaks; superciliary line, and sides of head and neck all around ashy gray; indistinct blackish markings on side (rictal and post-ocular stripes) outlined against the gray; scapulars and interscapulars broadly and strikingly streaked with black margined with rufous and buffy; rump clearer ochraceous; tail-coverts again streaked with black on rufous ground; tail rufous with brighter edgings and dusky shafts, and sometimes indistinct fine cross-bars (as in *M. melodia*); wings plain rufous, coverts and inner quills with black centers; edge of wing white; below, gray or sordid white, with strong tawny wash on sides, flanks and crissum, the flanks faintly streaked with black; bill black above, lighter below. The purity of chestnut on head varies considerably according to age and season, having a large admixture of black in younger birds, and in adults in winter. In the fall also the pileum is divided by an indistinct gray line, and the breast is tinged with brown. Length, about 5.75 (146.1); wing 2.40 (61.); tail 2.35 (59.7); bill .46 (11.7).

Recognition Marks.—Warbler size but stockier; very like a Song Sparrow, but forehead black, and crown uniform chestnut; breast *not* streaked.

Nest, and eggs not clearly distinguishable from those of the Song Sparrow. *Eggs* average perhaps a little smaller, say, .75 x .56 (19.1 x 14.2).

General Range.—Eastern North America to the Plains, north through the British Provinces, including Newfoundland and Labrador. Breeds from the

Northern States northward, and winters from Massachusetts south to the Gulf States.

Range in Ohio.—Common migrant along streams and in low places. Breeds only casually.

THE Swamp Sparrow is well named, but its designation must be understood in the broadest sense. Not only is it to be found in the sedgy fastnesses of the more pretentious swamps, but in the wayside bog, and along the tangled edges of woodland watercourses as well. In many respects it deserves to be classed with the inhabitants of that under-world of muck and sedge where the Rails and Gallinules live and move and have their being. Shy and secretive to a degree, the Swamp Sparrow will often worm through the intricacies of a half-submerged brush-heap and splash its way afoot to another rather than take wing. Again, if the observer is quiet, the bird will hop about carefully through the reeds and survey him from all sides with the curiosity of a Wren. Several times in spring I have seen them feeding along the shallows of the Olentangy River in company with Water Thrushes, wading about and dabbling in the water with almost the freedom of a Sandpiper, but upon the first hint of alarm the Sparrows would scuttle off to the shelter of the brush.

One is slow to suspect such a demure bird of having a sprightly song. On several occasions, however, while wading about knee deep in some shaded pool, I have been startled by a sudden trill of unusual energy and distinctness, which undoubtedly proceeded from this bird. On some occasions the song is almost as peremptory as that of the Water Thrush, while at others it seems more like the vivacious ditty of the Palm Warbler rendered fortissimo. It has frequently been likened to that of the Field or Chipping Sparrows, but in my opinion, comparison with any other Sparrow song will not be found helpful.

Only one instance is known as yet of the bird's breeding within the state. Late in May, 1881, Dr. Howard Jones of Circleville secured a nest of five eggs, together with the parent bird. Dr. Jones had been walking slowly along a small ditch which drained a field of wet grassland, and was about to step across it when the mother bird flew from under his feet. After some search he found the nest hidden under a bunch of long grass. "It is made principally of coarse grasses and frayed weed-stems—a few rootlets are to be seen in the foundation, and the lining is composed of grasses. The diameter of the cavity is two inches, its depth one and one-half inches. When in position, the rim of the nest was on a level with the surrounding sod, and a long tuft of grass concealed it from above and protected it from the weather."

Dr. Jones says further: "This is the only nest of the species I have found, altho I have frequently searched for it. The kind of country inhabited by

this Sparrow, its retiring habits, and general inconspicuousness, all combine to make its home hard to find and its habits hard to study. Even in sections where it is common it is but infrequently seen, and it might breed and remain throughout the year in many localities in the state and escape observation by any one able to distinguish it from other Sparrows."

The Swamp Sparrow is known to breed sparingly in Pennsylvania throughout the state, having been studied there by Wilson and others. Professor A. W. Butler reports its breeding commonly in northern Indiana. Mr. E. W. Nelson regards it as more abundant than the Song Sparrow in Cook County, Illinois, during the breeding season, while Mr. Ridgway finds it wintering in immense numbers in the southern parts of that state.

No. 42.

FOX SPARROW.

A. O. U. No. 585. **Passerella iliaca** (Merr.).

Description.—*Adult*: Upper parts rusty red in spots and streaks, on an ashy or olive-gray ground, smaller and sharper on the crown, broader and deep on interscapulars; all wing feathers more or less margined with rufous, and with dusky inner webs; middle and greater coverts tipped with whitish; edge of wing white; upper tail-coverts clear bright rufous; tail rufous with (mainly) dusky inner webs; below white, heavily spotted and blotched on sides of head and throat and on breast with rusty red; on sides and flanks with elongated or sagittate streaks of deeper ferruginous, and on lower breast with open arrow-shaped markings of brownish black; bill dark above, yellow below; feet pale. Length 6.50-7.50 (165.1-190.5); av. of five Columbus specimens: wing 3.44 (87.4); tail 2.77 (70.4); bill .45 (11.4).

Recognition Marks.—Sparrow size, but appearing at times almost as large as Chewink; rusty red coloring and heavily spotted breast; bright rufous of upper tail-coverts and tail.

Nesting.—Does not breed in Ohio. *Nest,* in low bushes or on the ground, of coarse grasses, moss, and vegetable fibers, lined with fine grass and feathers. *Eggs,* 4-5, pale bluish, speckled and blotched with reddish brown or chocolate. Av. size, .80 x .63 (20.3 x 16.).

General Range.—Eastern North America west to the Plains and Alaska, and from the Arctic Coast south to the Gulf States. Breeds north of the United States; winters chiefly south of the Ohio and Potomac Rivers.

Range in Ohio.—Common spring and fall migrant.

IT may be set down as a maxim for the encouragement of the faithful that all birds which should sing at all do sing sometimes during migrations. There is the Fox Sparrow, a bird of most engaging appearance, nearly as

large as a Thrush and quite as fine. We feel sure that he is concealing a rare gift of song under that rusty cloak of reserve. As for him his one ambition seems to be to slip away unobserved, unless indeed it be to steal a sly glance at you from behind some tree-bole. His only note as he speeds with strong wing into cover is a thrasher-like *chuck* of alarm. Year after year, it may be, one comes upon shy companies of these handsome fellows in brush-strewn woods or in the undergrowth of river bottoms, but never a song do they vouchsafe. Dr. Wheaton died without having heard the song of the Fox Sparrow.

Finally on some favored day—there is not a breath to tell you of the good fortune in store—a clear, strong, exultant song bursts upon your ears from some half-distant copse, *Chee-hoo, ker-weeoo, weoo, weeoo, weoo.* The Fox Sparrow has found his voice.

There is a sweetness and vivacity about the song which wins our admiration at once. It speaks so eloquently of anticipated joy, that we must envy the bird his summer glade in wild Keewatin. Our Vesper Sparrow whistles a somewhat similar tune, but he is all contentment, realization now, and at half the cost. Professor T. C. Smith, who has been exceptionally favored at Columbus, says in this connection[1]: "The voice of the Fox Sparrow in its full power is clear, sustained, and rendered rich by overtones. It has not, of course, the metallic, vibrant ring of the Thrushes or the Bobolink, it is rather the Sparrow or Finch voice at its best, a whistle full of sweetness with continual accompanying changes of timbre.

"Unlike most of the Sparrows the Fox Sparrow displays an ability to let his notes drop into one another by a quick flexible slide, usually accompanied by a slight change in timbre, which is the characteristic of the warbling birds such as the Vireos—in this respect he surpasses all of his race that I have ever heard except the Rose-breasted Grosbeak and the Cardinal."

More frequently the Fox Sparrows are heard singing—sometimes in chorus—in a subdued tone or half-voice. The effect at such a time is very pleasing, but one does not get any adequate impression of the bird's powers of modulation or sweetness.

1 See an excellent article by Professor Smith on the "Song of the Fox Sparrow" in the Ohio Naturalist, April, 1903.

No. 43.

TOWHEE.

A. O. U. No. 587. **Pipilo erythrophthalmus** (Linn.).

Synonyms.—CHEWINK; GROUND ROBIN; RED-EYED TOWHEE.

Description.—*Adult male*: Glossy black; belly abruptly white; sides chestnut to yellowish brown; flanks and crissum tawny; whitish marks on inner quills; outer primaries edged with white at base on outer web, and at an interval along margin increasing inwards, forming a white spot with a "tail"; three outer pairs of tail-feathers broadly tipped with white, the outermost pair for half its length; black feathers of throat with concealed white bases; bill black; feet pale brown. *Adult female*: Like the male except black replaced by warm brown, brightest on breast, darkening behind; somewhat smaller. Adult male, length, 7.50-9.00 (190.5-228.6); av. of five Columbus males: wing 3.44 (87.4); tail 3.66 (93.); bill .52 (13.2).

Taken near Circleville. *Photo by the Author.*

WHERE TOWHEE HIDES.

Recognition Marks.—Chewink size; black, white, and chestnut in masses; "*Chewink*" cry; semi-skulking, terrestrial habits.

Nest, on the ground, of dead leaves, strips of bark, etc., lined with fine grasses. *Eggs,* 4 or 5, white, thickly and evenly speckled with reddish brown. Av. size, .95 x .71 (24.1 x 18.).

General Range.—Eastern United States and southern Canada, west to the Plains, breeding from the lower Mississippi Valley and Georgia northward; in winter from the middle districts southward.

Range in Ohio.—Common and universally distributed. Winters sparingly in central, and (at least the males) commonly in southern Ohio.

THE impulse to name birds according to what their songs and calls seem to indicate in human language surely had a large part in the final adoption of Towhee for this bird's name. *Towhee* for the song that he gives to all the world from the topmost twig of some tree growing amid his tangled retreat, *Chewink* for the call of warning when his rights are threatened, and *Wink-wink* when he is nearly frantic at the danger to his family of eggs or young. The song is seldom simply double syllabled, but the two prominent notes are all that many persons seem to hear. The loud song may be *Tow-hee-e-e, O, tow-hee-e-e-e,* or even *Chip, ah, tow-hee-e-e.* Its beginning is subject to many changes, but its close is almost invariably a trill of greater or less length on "*e*," and always high pitched. I never could make the song spell "*Chuck, burr, pilla-will-a-will.*" But different ears hear the same song differently. The alarm call may be shortened to "*swink,*" or "*wink.*" The birds even shorten their vocal expression to "*Chuck, chuck,*" when the nest is in great danger. Before the arrival of the female from the south the male sometimes gives a rarely beautiful performance as a sort of soliloquy as he sedately walks about among the leaves under a thick bush. It is totally unlike his ordinary song, and baffles any attempt at a description. It is soft and does not carry beyond twenty feet. The tree-top rendition is clearly his altruistic song, while this other one is as truly his egotistic song.

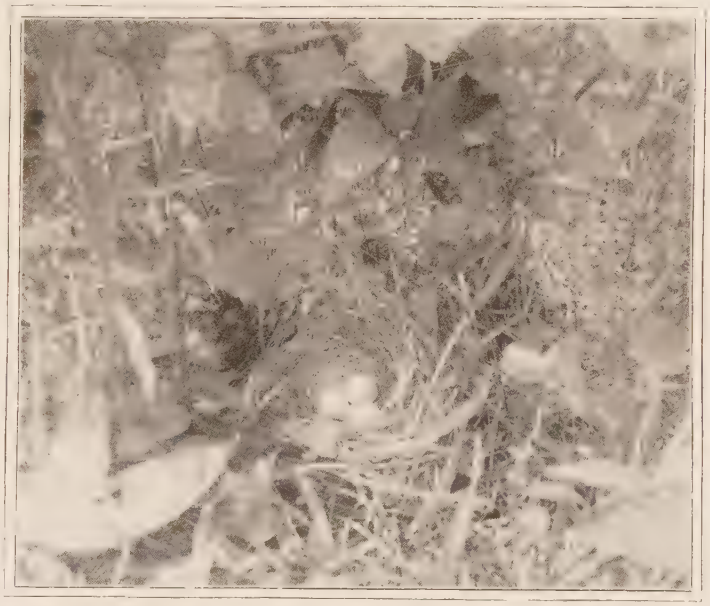
Towhee has been called Ground Robin, probably because his sides are strongly washed with rufous and because he builds his nest on the ground. In general habits he is wholly unlike the Robin. One must look in the brushy woods, or brush tangles, not in the open woods for this bird. He is a nervous fellow, emphasizing his disturbance at your intrusion with a nervous *fluff, fluff* of the short wings, and a jerk and quick spreading of the long, rounded tail, as if he hoped the flash of white at its end would startle the intruder away.

Occasionally hardy males may be found all winter even as far north as Oberlin, but the true migration begins late in March, and the most of the birds have gone south by the first of November. Numbers spend the winter in the southern half of the state.

Nesting begins about the first of May, earlier south, and earlier in early springs. While the nest is usually placed on the ground, often even in a slight depression, it may sometimes be placed in a bush several feet from the ground. It is made largely of leaves, with some plant stems, bark and grass, with a lining of rootlets. The birds do not search far for material, but are

satisfied with that which is near at hand. Sometimes the nest is arched over after the fashion of the Oven-bird. The nest site is usually some distance from a roadway or path, often in moderately deep woods where there is little underbrush, but oftener in brushy thickets, or shrubbery fringing woods. The accompanying illustration of a nest and eggs was taken from a nest placed in a pasture in an open field, some fifty rods from a woods, and ten feet from any brush. Here at Oberlin I have found more nests in the second growth near swampy places than elsewhere.

While Towhee does not seem to be a stupid bird, it is a wonder to me that he will permit the parasitic Cowbird to fill his nest, sometimes to the complete exclusion of his own eggs, and serenely hatch and care for the foster young. Twice I have found a Towhee's nest containing 4 eggs of Cowbird and none of the rightful owner, on which the female Towhee was sitting as contentedly as though the eggs belonged to her. Most nests contain one or more eggs of Cowbird. Possibly the explanation lies in the fact that the Towhee and Cowbird eggs are much alike in appearance. However, the Cowbird eggs are marked with grayish-brown, while the Towhee eggs are marked with reddish-brown, and average larger.



Taken near Oberlin. *Photo by Lynds Jones.*

NEST AND EGGS OF THE TOWHEE.

Because Towhee seems able to adapt himself to changing conditions of the landscape, which is inevitable with fuller settlement of the land, we may hope that he will be a permanent member of sylvan society. A woods without a Towhee to herald the morning would lose half its glory.

LYNDS JONES.

No. 44.

CARDINAL.

A. O. U. No. 593. **Cardinalis cardinalis** (Linn.).

Synonyms.—Red-bird; Cardinal Red-bird; Cardinal Grosbeak.

Description.—*Adult male in spring*: Region about base of bill (the capistrum) and throat black; rest of plumage vermilion,—brightest on crest, sides of head, and below, darker and with a rosy tinge above; feathers of back and rump with grayish skirting; inner webs of wing-feathers fuscous; bill light red; feet brown. *Adult female*: Capistrum grayish black; wings, tail, longer feathers of crest, and a spot above the eye dull red; occasionally faint tinges of red on the cheeks, lower throat, and tibiæ; remainder of plumage ashy brown, duller above, brighter and more ochraceous on breast, paler below. Males vary considerably in the amount of gray on upper parts. *Young* birds, like adult female, save that the bill is dark, and males are tinged below with vermilion in varying proportions. Very variable as to size. Adult male, length, 7:50-9.00 (190.5-228.6); av. of ten Columbus specimens: wing 3.67 (93.2); tail 3.82 (97.); bill, length along culmen .63 (16.); depth at base .62 (15.8).

Recognition Marks.—Chewink size; cardinal-red at least on wings, tail, and crest; black or blackish face mask; large, thick bill.

Nest, usually of rather careless construction, of twigs, coarse grass and trash, lined with fine grass and rootlets, and placed in thickets or low in trees. *Eggs,* 3 or 4, sometimes 5, white, or with bluish, greenish or grayish tint, spotted regularly, or irregularly blotched and dotted with reddish browns, grays, or lavender. Av. size, 1.00 x .71 (25.4 x 18.).

General Range.—Eastern United States, north to the lower Hudson Valley and the Great Lakes, casually further north, and west to the Plains. Resident in Bermuda.

Range in Ohio.—Abundant resident. Less common but increasing northerly.

PROBABLY four persons out of five—at least in the southern half of the state—if asked to name their favorite songster, would reply promptly, the Red-bird. For who is there to the manor born, whose heart does not flood with pleasant memories as he listens to our poet, Naylor's words?

"Along the dust-white river road
The saucy red-bird chirps and trills;
His liquid notes resound and rise
Until they meet the cloudless skies
And echo o'er the distant hills."

Not merely for the splendor of his plumage, but for the gentle boldness of his comradeship and the daily heartening of his stirring song, the Cardinal is beloved of all who know him.

Some years ago the Cardinal had good reason to complain of our fondness, but now that wise legislation has forbidden his imprisonment he sings

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CARDINAL
Cardinalis cardinalis
⅞ Life-size

unfettered at many a door where he was formerly unknown. Always abundant in the south the species has of late increased rapidly in the north as well; and the time is not far distant when our Canadian neighbors can no longer say of it, "Casual only in southwestern Ontario."

Wherever known the birds are resident or nearly so. In winter they may gather in loose companies to enjoy the shelter of some favorite copse or lowland thorn-brake. At such a time it is a rare treat for two or three observers to "drive" the birds from cover. They will slip along unnoticed in unsuspected numbers until the last bush is reached; whence they will break for distant cover in twos and threes not without much remonstrance of sharp *chips,* and manifest reluctance to draw the gaze of a world in white. Thus I have seen them, a whole college of Cardinals, rudely disturbed in secret session, but have always sought and found prompt shrift.

Both males and females sing, the latter perhaps with less force and frequency. A warm day in winter is welcomed as an excuse for song, but the male is most indefatigable during the nesting season. Fearless now he seeks some outlying branch or mounts the tip of the tallest tree and challenges attention. The whistled notes of the Redbird, assertive, interrogatory, staccato and accelerando, are too well known to require characterization. The following syllabizations may serve to recall a few of the leading forms:

1. *Ché-pêw, ché-pêw, wé-oo, wé-oo, wé-oo.*
2. *Whé-tew, whé-tew, whe-oo, whe-oo.*
3. *We-oo, we-oo, we-oo, we-oo, we-oo.*
4. *Chitikew, chitikew, he-wêêt, he-wêêt.*
5. *Tshew, tshew, tshew, tshew, tshew.*
6. *Who-ý? who-ý? who-ý? who-ý?*
7. *Bird'-ie, bird'-ie, bird'-ie, tshew, tshew, tshew.*
8. *Bird'-ie, bird'-ie, bird'-ie, bird'-ie.*

By the merest good luck I found out one day how the Cardinal got his red beak. Secreting myself in a log pile I imitated the notes of the Screech Owl—a favorite method of securing a muster of the local bird population. True to life a Cardinal came charging up in great haste. Between his mandibles was a half-eaten wahoo berry from which the rich red juice was flowing, staining the bird's bill completely and running down upon his breast. The suggestion might lead further, but I do not press it.

The Cardinal is first of all granivorous; but this term must be understood to cover the consumption of weed-seeds of many sorts, including some hard-coated specimens which few other birds are able to crack open. Insects are also eaten freely, and berries "in season." If encouraged the bird will glean about our premises in winter, haunting the grape-trellis and garden, and roosting, it may be, in the *arbor vitae.* The young are fed for the first

week by regurgitation, but after that the parents supply them grain and insects directly or assist them in cracking seeds.

After the Robin the Cardinal's nest is the easiest to find, and perhaps the most common in middle and southern Ohio. Nesting begins early in the season, and two, sometimes three, broods are raised. April 15th, 1901, before a green leaf had shown itself in Columbus, I found a full set of eggs

Taken near Circleville. *Photo by the Author.*

THE CARDINAL'S NEST.

in a rude nest placed in a bunch of drift material which had caught from a recent flood. Others have reported eggs as late as August 28th.

Nests are usually placed low in bushes, or at moderate heights in thickets and saplings. Grape-vine tangles and porch trellises are favorite places, and occasionally nests are saddled upon horizontal limbs of trees. Miss Gertrude F. Harvey of Bond Hill (Cincinnati) kept a most interesting diary of a pair which nested in her conservatory. The nest was placed in a Marechal Neil rose-bush, to which the birds found access first through a roof ventilator and then through the open window.

In construction the nest varies from tidy to disreputable, according to skill and season. A typical one is composed externally of long stiff weeds and leaf-stems, and measures roughly seven inches across, with an extreme

of thirteen inches. Next comes a mat of dead leaves, mostly beech. Inside this in turn is a tough basket-work of grape-vine bark and a lining of fine fresh grass cured in the nest. It measures, inside, three and a quarter inches in width and two and a half in depth.

The eggs are quite variable; even those in the same nest are hard to reconcile, both as to shape and markings. Because of the similarity in appearance, Cowbirds' eggs are easily imposed upon the Cardinal. Professor Jones and I once found a nest with the bird on, whose three eggs were to the best of our judgment the combined product of as many Cowbirds.

The young hatch out in about fourteen days, and are ready to leave the nest in ten days more. The father is especially devoted to his offspring, and often cares for them while the female is busy with another nest.

Rev. W. F. Henninger informs me that a German farmer of his acquaintance near Tiffin kept a Cardinal in captivity for almost exactly thirty years. The bird was not taken from the nest by its long-time owner and its age at the time it came into his possession was not known. The captive songster became a great favorite and was for years regarded almost as a member of the family. Its death in December, 1902, followed within a day or so that of the farmer's wife.

No. 45.

ROSE-BREASTED GROSBEAK.

A. O. U. No. 595. **Zamelodia ludoviciana** (Linn.).

Description.—*Adult male*: Head and neck all around and upper parts glossy black; below white; a rich carmine or rose-red crescentic or shield-shaped patch on the breast bordering the black of the throat, and produced irregularly down the middle of the lower breast; lining of wings rose; middle coverts and a large spot at base of primaries white; rump white; much concealed white on cervix and back, and a slight fuscous edging of feathers; white blotches near extremity of tail-feathers on three outer pairs; flanks sometimes tawny, with dusky streaking; bill light or white; culmen much curved; feet dark brown. *Adult female*: Quite different; above dusky brown in streaks, with obscure whitish median, and conspicuous white superciliary lines; feathers of crown and back heavily edged with flaxen or buffy; coverts and inner quills merely tipped with whitish; wings and tail fuscous, lining of wing saffron-yellow,—no black anywhere; below white with slight buffy or tawny suffusion on sides, breast and flanks; sharply and finely streaked with dusky on sides of throat, breast and sides; auriculars hair-brown; bill light brown; feet dusky. *Young*: Like female, the males gradually acquiring adult characters and first known by rosy lining of wings. Adult male, length, 7.75-8.50 (196.9-215.9); av. of six Columbus males:

wing 3.95 (100.3); tail 2.84 (72.1); bill, length, .66 (16.8); bill, depth, .51 (13.). Female somewhat smaller.

Recognition Marks.—Chewink size; male easily known by the black, carmine, and white of fore-front; female by large bill with white eye-brow, sharply streaked breast, and general streaky appearance above.

Nest, oftenest a careless bunch of grass-stems or weed-stalks, but sometimes carefully constructed, in bushes of thickets or in low trees. *Eggs,* 3 or 4, dull greenish, spotted and blotched with reddish browns. Av. size, 1.00 x .73 (25.4 x 18.5).

General Range.—Eastern United States and southern Canada, west to Manitoba and the eastern border of the Plains, breeding from Kansas and the mountains of the Carolinas northward; south in winter to Cuba, Central America, and northern South America.

Range in Ohio.—A regular, but not very common summer resident; less common or wanting in southern part of state.

WE are none of us likely to forget our first meeting with this distinguished bird. It was probably on a perfect morning early in May, when we were poking about in a brushy patch near the river, all on the qui vive with the spring expectancy. *Thkimp!* What was that? *Thkimp!* again the nasal explosive, half inquiring, half disturbed. Ah, there he is, quitting cover for a bunch of leafless weed-stalks that he may for a moment see and be seen. "What a beauty!" we exclaim, "and to come so far north!" For we feel instinctively that we are beholding a scion of tropical stock. And such indeed he is, altho he has long since become naturalized in the middle north and Canada.

Yet for all he is a northern pioneer, he is no mere adventurer. His every movement betrays the culture of good breeding and conscious quality. His dress, too, is faultless, as becomes a perfect gentleman. A black suit with white cuffs,—or maybe several pairs, no matter—an immaculate white vest, and an ample red cravat, all complete. His wife will not be along for a few days yet; that is, not until the head of the expected family has done the rough work of pioneering; and when she does come you will not know her for the mate of such a brilliant lord, until you catch them one day exchanging confidences, *sotto voce.*

During migrations this Grosbeak often keeps to the highest tree-tops where his bright colors almost escape notice amidst the newly bursting verdure; but he is most at home in second-growth thickets and swampy tangles. In either case he sings freely, a rich, rolling, continuous warble, which is among the finest of woodland notes. The song is most nearly comparable to that of the Scarlet Tanager, but it is to be distinguished by its rounder quality and the entire absence of phrasing. When singing to his mate the bird sometimes stands on tiptoe with excitement, and makes the thickets vibrate with long-drawn melody. Sometimes, especially if you are known

to be watching near, the music is interrupted by the harsh nasal *thkimp*, or *kimp* of distrust and warning.

The nest is usually a flimsy affair of twigs, weed-stalks, and rootlets, placed at moderate heights in thorn bushes, swamp willows, orchard trees, and the like. One nest that I found in Black Swamp in Lorain County, was composed entirely of fine grass-stems; and the two eggs which it contained were perfectly visible from below. Another, to which the male bird

Taken in E'y Park, Elyria *Photo by the Author.*

A FAVORITE HAUNT OF THE GROSBEAK.

was kind enough to call my attention, by singing as he sat, was made of dried sedge leaves. This carelessness of nest construction is considered evidence of the fact that the bird was formerly accustomed to a warmer climate, to a tropical range in fact, where warmth of bedding would be no object. The male bird shares faithfully the duties of incubation; and is sedulously devoted to the care of his little flock. In this case at least, fine feathers have made a fine bird.

The food of the Rose-breasted Grosbeak consists largely of seeds and wild fruits; but insects, especially grubs and beetles, furnish a portion of its fare. In some localities it has won the ill-sounding but certainly meritorious name of "potato-bug bird."

No. 46.

INDIGO BUNTING.

A. O. U. No. 598. **Cyanospiza cyanea** (Linn.).

Synonym.—INDIGO-BIRD.

Description.—*Adult male*: Indigo-blue, clear and intense upon head and throat, passing insensibly into greenish or cœrulean blue elsewhere; lores black; wings and tail blackish with some greenish blue edging; bill black above, lighter below, with narrow black stripe along gonys. *Adult female*: Quite different; warm gray-brown, most intense on back and crown, paler below and with obscure smoky streakings on breast and sides—the lesser wing coverts with the edges of primaries and rectrices exhibit a greenish tint. *Young male*: Like female but browner, soon showing traces of blue. *Adult male in winter*: Like female but darker; blue only partially suppressed. Length 5.50-5.75 (139.7-146.1); av. of eight Columbus males: wing 2.66 (67.7); tail 1.98 (50.3); bill .41 (10.4). Females smaller.

Recognition Marks.—Warbler size; male indigo-blue; female warm brown, unstreaked above.

Nest, a compactly built cup of weeds, grasses, vegetable fibers, dead leaves, etc., neatly lined with rootlets, grasses, and horse-hair; usually placed in crotch of bush not far from ground. *Eggs,* 4, bluish or greenish white, unmarked; sometimes pure white. Av. size, .72 x .54 (18.3 x 13.7).

General Range.—Eastern United States, west to Plains, north to about latitude 47°. South in winter to Central America.

Range in Ohio.—Common summer resident; breeds throughout the state.

TO a casual observer the male and female Indigo-birds appear to live in separate spheres and to have very little in common. This is partly because the female is such a plain-looking "brown bird" that it requires the closest scrutiny to discover upon her shoulders faint traces of the royal blue which marks her lord. Then, again, she is a most prosaic creature, skulking about through thickets and briar patches or fussing with the children, while her handsome mate spends his time in the tree-tops singing with his little might and main. As a result, the Indigo-bird proper is one of the most familiar features of wood's edge and wayside, while the Indigo-bird, by courtesy—or shall we say by marriage?—is one of the least known of Sparrows.

The singing bird makes no attempt at concealment, but seeks the most prominent position possible on telegraph wire or tree-top, and repeats at frequent intervals a piercing but not very melodious warble, which rises and falls in sharp cadences, and finishes with a hasty jumble of unfinished notes,

as tho the singer were out of breath. This song is kept up through the greater part of the day, and the singer is at his very best during the warm months of July and August. At this time his is often the only voice which relieves the monotony of a sultry day, and his efforts have won warm admiration on this account. Now and then the bird dives down to earth to attend to some domestic duty, but he is back again presently "climbing a golden

Taken near Columbus. *Photo by the Author.*

A WOODSIDE MUCH FREQUENTED BY INDIGO BUNTINGS.

THE BLACKBERRY PATCH IN THE FOREGROUND CONTAINS A NEST, WHILE THE TREES ABOVE AFFORD A COMMANDING VIEW SUCH AS THE MALE INDIGO DEARLY LOVES.

staircase of song" as he flits from branch to branch, until he has gained his topmost perch again. Here he sings for a time with such vigor that we are sure he is glad to be quit of his vexatious cares.

If one looks in the bushes or crowded, rank weeds for the Indigo's nest, he will soon be joined in the search by a wild-eyed female, who dogs his every step and expostulates with him by vigorous *chips* for every movement of the foliage. The maternal Indigo is the soul of suspicion, and her protests are so

emphatic that the inquisitor believes himself "hot" when he may be a dozen yards away. As a result the nest is rather hard to find; and the number found in a season's nesting will be out of all proportion to the abundance of the birds.

Taken near Oberlin. *Photo by Lynds Jones.*

NEST AND EGGS OF THE INDIGO-BIRD.

The nests, while usually bulky, are models of neatness and strength. Dead leaves and grasses make up its mass, and there is a copious lining of fine grasses with an admixture of horse-hair. Often two, and sometimes three, broods are raised in a season.

The eggs are of a beautiful pale blue, warmed, while fresh, by the color of the contents. Of their occasional variation Dr. Coues says: "The egg is variously described as pure white, plain blue, or bluish speckled with reddish. The fact appears to be, not that these statements are conflicting or any of them erroneous, but that different eggs vary accordingly. It seems to be the general rule with normally bluish eggs that they range in shade from quite blue to white, and are occasionally speckled."

No. 47.

DICKCISSEL.

A. O. U. No. 604. **Spiza americana** (Gmel.).

Synonym.—BLACK-THROATED BUNTING.

Description.—*Adult male*: Head and neck above and on sides dark gray, tinged with yellow on crown; a yellow superciliary stripe, and a yellow maxillary spot; chin and sides of throat white, nearly enclosing an apron-shaped patch of black; breast lemon-yellow; sides and flanks smoky gray fading into dingy white of belly; remaining upper parts light brown, modified by dusky stripes of middle back, and fuscous of wings and tail; lesser and middle wing-coverts bright bay; edge of wing yellow: *Adult female*: Similar but without black patch on throat, and with less yellow; scattering maxillary and pectoral black streaks; bay of wings merely indicated by rufous edgings. The plumage of the adults is brighter in the fall. Length 6.00-7.00 (152.4-177.8); wing 3.28 (83.3); tail 2.31 (58.7); bill .54 (13.7). Female smaller.

Recognition Marks.—Sparrow size; black throat and yellow breast of male (somewhat like the Meadowlark's); female obscure, but showing traces of same coloration.

Nest, a bulky but well made structure of weed-stalks, grasses and leaves, lined with finer grasses, rootlets, etc.; placed low in trees or bushes, or on the ground. *Eggs,* 4 or 5, pale blue, glossy. Av. size, .80 x .63 (20.3 x 16.).

General Range.—Eastern United States, west to Rocky Mountains, north to Ontario and the Dakotas; rare easterly. South in winter through Central America to northern South America; southwest in migrations to Arizona.

Range in Ohio.—Not uncommon in western and central portions, but locally restricted; rare or wanting in the northern and eastern portion.

NATURE is a harmonious whole and her language is in a sense above criticism. But her various voices must be heard each in its appropriate setting. The scream of the eagle befits the crag alone, and the lisping of the wood warbler must be accompanied by the tender rustle of unfolding green. Similarly the song of Dickcissel, that dear droning midsummer sound, requires the setting of ample meadow or boundless prairie to be rightly understood. Nothing could be more absurd or more monotonous to the point of madness than the iterative clatter of a Dickcissel pent within four walls. But sprinkle about a dozen of him over the bending daisies of a forty acre field, set a light breeze blowing, turn on the music, and nothing could be more eloquent of the delights of haying time and harvest than the earnest tautophony of this same bird. It is the sub-dominant note of out-of-doors, blending alike with the clink-clank of the smitten scythe, the clattering din of the twine-binder, or the chorus of the reapers' song.

The bird usually selects the highest point available,—a commanding tree-top, a passing telegraph wire, or a stout clover-stem if nothing better offers. Here with head erect or nodding with the rythm, he pours forth by the hour

those clinking syllables, which because of their very simplicity have been so variously interpreted: *Sheep, sheep, shear, shear, sheep;* or *See, see, see me here, see;* or better still, *Dick, dick, dickcissel.* The three sentences just given fairly represent the range of variety in accent as well as in tempo.

The female is a shy bird and her movements are known only to her attentive spouse. Once the nest is built she relies upon her mate's diplomacy in conducting visitors out of bounds, while she sticks to her knitting. Sometimes if danger is quite imminent she will slip off the nest, but so quietly as to afford no clue for the

Taken near Columbus.
Photo by the Author.

A DICKCISSEL MEADOW.

search. Once off she manifests a singular indifference to all that is transpiring, and as likely as not refuses to appear upon the witness stand at all. The male sings only somewhat more energetically when the nest is being robbed, as if quite unable to comprehend the meaning of such a heartless proceeding.

The nest is commonly placed upon the ground, flush with the surface or slightly elevated. In either case it is apt to be a slovenly affair incapable of transportation. Sometimes, however, the nest is a close-knit structure placed from two to six feet high in wayside weed-clumps, bushes, or trees. Two broods are commonly raised each season, after which the birds become quite silent and prepare for an early departure in September.

This prairie-loving species is an invader from the south-west. Audubon

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SCARLET TANAGER
Piranga erythromelas
Nearly Life-size

reported it as rare in Ohio, while to Kirtland it was unknown. Dr. Wheaton considered it very common from 1860 on. It is somewhat irregular in its appearance, and while certain sections may swarm with them one year, it may be unknown in the next county and may disappear entirely the following season. It is doubtful whether its numbers have increased with us during the past quarter of a century.

No. 48.

SCARLET TANAGER.

A. O. U. No. 608. **Piranga erythromelas** Vieill.

Description.—*Adult male*: Scarlet vermilion; wings and tail black; lining of wing white; bill and feet blackish. *Adult female*: Entirely different; above olive-green; below greenish yellow; wings and tail dusky with greenish edging; bill and feet brown. *Young male and adult male in winter*: Similar to female but brighter; wings, tail and bill black. During moults and irregularly at other times the males show anomalous variegation of black, olive-green, scarlet, and dusky in patches. Length 6.50-7.50 (165.1-190.5); av. of eight Columbus specimens: wing, 3.81 (96.8); tail, 2.61 (66.3); bill, length along culmen .61 (15.5); breadth at nostril, .34 (8.6). Sexes equal sized.

Recognition Marks.—Sparrow size, but appearing larger because of bright colors; scarlet and black of male; olive-green and dusky of female.

Nest, rather loosely constructed of twigs, weed-stalks and bark-strips, lined with rootlets, blossom-stems, etc.; shallow and flat; placed from ten to fifty feet high on horizontal limb in orchard or grove. *Eggs,* 3-4, greenish blue, with spots and blotches of reddish brown, tending to run together in patches. Av. size, .95 x .64 (24.1 x 16.3).

General Range.—Eastern United States, west to Plains, north to Manitoba, Ontario, etc. In winter south to West Indies, Mexico, Central America and northern South America.

Range in Ohio.—Of general distribution, but less common southerly. Summer resident.

THOSE who haunt the woods in maying time are almost sure to see a vision of scarlet and black revealing itself for a moment in the higher treetops, but swallowed up again all too soon by the consuming green. If, however, the leaves are not yet fully sprung the Tanager will move about quietly or sit rather stupidly in the middle branches, as tho bored by the lack of green and at a loss what to do with his brightness. At this time his *chic burr,* or *chip-bird* cry is readily traced to its source and soon becomes one of the more familiar sounds of the woodland. The female is more modestly attired in a habit which blends perfectly with the foliage; but altho so different in color from her mate she is not hard to recognize, for she has much the same build

and carriage, and is oftenest seen in close company with him. Both birds are rather sedate in movement and have the habit of inclining the head to peer down at the observer with dignified interest.

Taken in Ely Park Elyria. *Photo by the Author.*

"Terr-qué-e-e-ry, zé-erve, peés-eroo, be-zoor."

The males arrive a few days in advance of their mates and at such times only may be found in close proximity to each other. Never shall I forget the day, when in treading an overgrown path by the riverside I came suddenly upon four males on a single limb not twenty feet away. The vision smote me like a blinding flash. The two oldest of the group were certainly among the most magnificent birds ever seen in Northern latitudes. Their coats were re-dyed to the point of scarlet saturation, and as they moved off slowly the memory of the bird-man received an indelible image of the Most Beautiful Four.

Sheltered woodlands, especially in broken country, shady hillsides, and the banks of streams, are favorite places for this bird; while second-growth clearings, open groves, and the trees which overlook unfrequented roads, also furnish acceptable nesting sites. In such places the Tanager's song may be heard throughout the morning hours. It is remotely comparable to that of the Robin, but it is more stereotyped in form, briefer, and uttered at

intervals rather than continuously sustained. The notes are sharp-edged and rich in r's, while the movement of the whole, tho deliberate, is varied, and the tone cheerful. *Terr-qué-e-e-ry, zé-erve, peés-eroo, be-zoor'*, may give a hint of the quality and tempo. The Tanager's note requires to be carefully distinguished from that of the Rose-breasted Grosbeak, which is smoother and more rolling in character.

The nest of this bird is not often so substantial as that shown in the illustration. It is usually placed on a horizontal branch of a tree, either saddled loosely upon it, settled among diverging twigs, or supported by forks. "From five to fifteen feet up," is given by some authors, but I have seen several nests at heights of forty or fifty feet, and do not believe that they are exceptional.

Taken near McConnelsville. *Photo by the Author.*

NEST AND EGGS OF THE SCARLET TANAGER.

THE NEST WAS CUT DOWN FROM THE TOPMOST BRANCH OF A YOUNG ELM AND BROUGHT TO THE GROUND FOR PHOTOGRAPHING.

No. 49.

SUMMER TANAGER.

A. O. U. 610. **Piranga rubra** (Linn.).

Synonym.—SUMMER RED-BIRD.

Description.—*Adult male*: Rosy vermilion, darker above (madder brown), lighter below; wings dusky on exposed ends and unexposed inner webs; bill pale; feet darker. *Adult female*: Above orange, olive-green or olive-brown; lighter with large admixture of yellow below (often ochrey or saffron); wings dusky as in male; bill and feet pale. *Young male*: Like adult female, but brighter. The red of the maturing bird comes in patches, but without black anywhere. Length 7.50 (190.5); wing 3.70 (94.); tail 2.70 (68.6); bill, length .71 (18.), breadth at nostril .38 (9.7).

Recognition Marks.—Sparrow to Chewink size; uniform red of male; olive and saffron of female; bill light, larger than *P. erythromelas.*

Nest, usually a shallow and frail structure of bark-strips, leaves, and vegetable fibres, placed near extremity of horizontal limb, ten to thirty feet up. *Eggs*, 3-4, light green or bluish white, dotted, spotted, and blotched with reddish or olive-browns. Av. size, .95 x .66 (24.1 x 16.8).

General Range.—Eastern United States west to Plains, north to about latitude 40°, casually to Massachusetts and Ontario. South in winter to middle and northern South America.

Range in Ohio.—Common summer resident in southern and southeastern, rare in middle, and casual in northern Ohio.

ALTHO occasional at Columbus and casual anywhere, this Tanager is nearly confined to the southern third of the state. Here it is much more common than its black-winged relative and much more familiar, not hesitating to establish itself in orchard or shade trees, and frequently visiting city parks. Dr. Jones reports it as abundant near Circleville where it is nearly confined to woods of oak and hickory. It seems to find an especially congenial home in the wooded, broken hills which line the Ohio River and the major streams which flow into it.

The scolding note of the summer Red-bird is such only in name, for no one could take offence at the mellow, mildly inquisitive *pittuc* or *pitit-it-ituc* with which the bird greets strangers. Its song, too, is not so sharp-edged as that of the Scarlet Tangler, altho the generic resemblance is quite marked. Consisting as it does of a succession of disconnected rolling phrases, it reminds one also not a little of the song of the Red-eyed Vireo.

The birds are very deliberate in movement, and give one the impression that they are taking a leisurely summer vacation and have plenty of time at their disposal. They are adroit, however, in catching insects on the wing, and do not shun the irksome duty of berry-picking.

According to Dr. Jones: "The nest is generally placed upon two or three small horizontal branches, and is supported at two or three points on its circumference by small upright twigs. The position selected is usually near the end of a limb, from five to twenty feet from the ground, ten or twelve feet being the usual height. Dead grass of various kinds is the chief material of construction. It is sometimes well selected and of a light straw-color; at others it is poor in quality and dirty-brown in color. The foundation and superstructure are ordinarily inseparable. * * Within the dingy and loosely-interwoven walls of the nest is commonly a bright and clean lining, composed

Taken in Morgan County.
Photo by the Author.

AT THE MOUTH OF DOUDA RUN.

A FAVORITE HAUNT OF THE SUMMMER TANAGER.

of slender blades of nicely bleached grass, and split and round grasses arranged in orderly fashion, and forming a smooth and elastic covering to the walls of the cavity. There is but little art displayed in the structure, being so poorly made that the early fall winds blow it from its supports."

No. 50.

BLACK AND WHITE WARBLER.

A. O. U. No. 636. **Mniotilta varia** (Linn.).

Synonym.—BLACK-AND-WHITE CREEPER.

Description.—*Adult male*: Black and white in streaks and stripes; two lustrous black stripes separated by broad median white stripe on head, and produced to cervix; superciliary stripe and under eyelid white; extreme chin and malar stripes white; ear-coverts and throat black; exposed tips of primaries and tertiaries and primary coverts dusky rather than black; tips of median and greater coverts broadly white; tail blackish with white or bluish white edgings; two outer pairs of feathers blotched with white on the inner webs near tip; upper tail-coverts black; belly white; remaining plumage black and white in streaks, broadest on breast and sides, finest on sides of neck; bill and feet black. *Adult female*: Similar to male, but throat white, and remaining under parts with fewer streaks, and sides washed with brownish. *Immature*: Similar to female, but with more streaks on under parts. Length 4.50-5.50 (114.3-139.7); wing 2.75 (69.6); tail 1.90 (48.3); bill .45 (11.4).

Recognition Marks.—Medium Warbler size; black and white in streaks and stripes.

Nest, on the ground, usually sheltered by stump, log, or projecting stone; of leaves, bark-strips, and grasses, with a lining of fine rootlets and hairs. *Eggs,* 4 or 5, white or creamy white, speckled and spotted with chestnut or umber, chiefly in a wreath about the larger end. Av. size, .67 x .55 (17. x 14.).

General Range.—Eastern United States to the Plains, north to Fort Simpson; south in winter through Central America and West Indies to Venezuela and Colombia. Breeds from Virginia to southern Kansas northward, and winters from Florida and the Gulf States southward.

Range in Ohio.—Common during migrations. Breeds sparingly throughout the state in wilder portions.

ALTHO placed at the head of the family of Wood Warblers, this modest bird comes more naturally into comparison with Creepers and Nuthatches. "Claws were made before wings," he grumbles to himself, and while his more gaily dressed kinsmen are flitting restlessly in and out among the tree-tops he clings and creeps, or rather hops, along the bark of the trunk and the larger branches. He lacks much, it is true, of being the methodical plodder that the Brown Creeper is; he covers a great deal more surface in a given time and is content, it must be confessed, with a rather superficial examination of any given territory. Then again he secures variety, not merely by tracing out the smaller limbs, but by moving in any direction,—up or down or sidewise—or even by darting into the air now and then to capture an insect which he has startled. Not infrequently he may be seen gleaning from the bark of bushes and saplings near the ground, or again in the tops

of the very tallest elms. Apple trees are cherished hunting grounds, and it is here that one may cultivate a really intimate acquaintance.

The Black-and-White is among the earlier migrant warblers, coming as it does during the last week in April and before the leaves are well out. At this time it is quite a conspicuous bird, in spite of the fact that its striped coat roughly approximates to the lights and shadows in the bark of a tree; but it is usually silent. When it does speak, a few days later, its voice is not altogether such as to command attention. Indeed its wiry squeaking song is likely to be lost to ear altogether amid the full chorus of

Taken near Sugar Grove. *Photo by the Author.*

A BIT OF BLACK AND WHITE'S DOMAIN.

warbler week; but when the rush is over, the singer, now indefatigable, will come to light again. At best the song is a tiny sibilation of no great carrying power: *Squeech, weech, weech, weech, weech,* is one rendering, while another carefully studied near Sugar Grove, lisped out, *Pss, wss, wuss, wuss, wuss, wuss, wuss, wss, wss,* in two keys, as indicated.

While common as a migrant, the Black-and-White Warbler is comparatively scarce as a breeding bird, being found sparingly only in the more densely wooded and broken regions of the state and about the larger reservoirs. Wheaton speaks of it indeed, as a common breeding bird, but I am not aware

of a nest's having been definitely reported within the state. During the second week in June birds were seen feeding full grown young in the ravines opening into the valley of the Hock-hocking near Sugar Grove. The scene represented in the accompanying illustration was persistently haunted by two anxious parents, but the particular objects of solicitude were not discovered. The tree which appears in the middle distance provided a favorite line of descent to the male bird on his frequent errands of mercy; and, standing as it does in contrasting sun and shadow, it affords a curious reminiscence of the bird itself.

The nest of this Warbler is invariably placed upon the ground, a bulky collection of bark-strips, leaves and trash, carefully lined with fine grasses, rootlets and hair. It often courts the protection of some over-shadowing bush-clump, stump, or log, and not in vain, as our still empty collections testify.

No. 51.

PROTHONOTARY WARBLER.

A. O. U. No. 637. **Protonotaria citrea** (Bodd.)

Description.—*Adult male, in highest plumage*: Head and neck all around and under-parts down to crissum, golden yellow (Indian yellow), paler below, an orange tint sometimes perceptible on crown and throat; back, and hind-neck on sides, olive; rump bluish ash; wings dusky, overlaid with bluish ash on secondaries and narrowly on outer webs of primaries, and touched with olive on the coverts; tail-feathers bluish ash with dusky centers and tips, the outer pairs broadly and decreasingly blotched with white on the inner webs; crissum white; bill black; feet dark brown. Except in the highest plumage the olive of the back encroaches more or less upon the crown and the sides of the neck. *Adult female*: Similar, but paler yellow, and with white on belly; crown always overlaid with olive; bluish ash of wings and tail duller. Length 5.50 (139.7); wings 2.77 (70.4); tail 1.87 (47.5); bill .55 (14.).

Recognition Marks.—Medium warbler size; head and under-parts, golden yellow; back olive; wing and tail bluish ash; bill black; wings without white (thus distinguished, as well as by superior size, from *Helminthophila pinus*).

Nest, in cavities, deserted woodpecker holes and the like, in small trees standing in or near the water, one to eight feet up, and heavily lined with moss. *Eggs,* 3-7, white or creamy-white, heavily spotted with rich chestnut, sometimes nearly concealing ground color. Av. size, .68 x .55 (17.3 x 14.).

General Range.—Eastern United States, west to Nebraska and Kansas, north to Virginia, southern Michigan and Iowa, casually to New England, Ontario and Minnesota; in winter, Cuba and northern South America. Breeds throughout its United States range.

PROTHONOTARY WARBLER
Protonotaria citrea
About Life-size

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Range in Ohio.—Rare during migration. Summer resident in restricted localities, such as the Grand and Licking Reservoirs, and the major streams draining into the Ohio. Casual elsewhere.

PRE-EMINENT in a galaxy of beauties is this truly "golden" Warbler of the swamps. He does not come over hill and dale with a rush and flutter of wings and a nervous anxiety to get on, such as characterizes most of the northern migrants, but proceeds rather in leisurely fashion along the valleys of the larger streams. Sedate in movement and fearless, but not bold, in bearing, this rare bird appears to bring with him something of the languorous air of the South-land from which he hails. His chosen haunts, too, flooded lowland woods, are even more strongly suggestive of those watery fastnesses of the south, where the species is found in greatest abundance.

Photo by the Author.

A PROTHONOTARY WARBLER'S FRONT YARD.

A NEST IS SITUATED JUST OVER THE LEVEE WITHIN 20 FEET OF THE WATER'S EDGE. LICKING RESERVOIR, LICKING COUNTY, OHIO.

Indeed, it is within comparatively recent times that the Prothonotary Warbler has become known as a bird of Ohio. Dr. Wheaton first reported it in 1862 on hearsay evidence. It was afterwards found breeding at the St. Mary's reservoir by Mr. Charles Dury, of Cincinnati. In the spring of 1902, Mr. Irving A. Field of Granville found it breeding at several places about the Licking Reservoir, where I also had the pleasure of studying it, both at that time and during the season of 1903. On the 28th of April, 1902, I observed a male on the banks of the Olentangy near Columbus, and again two days later.

As one walks along that portion of the containing levee of Licking Reservoir shown in our first illustration, a glance to the right discovers only the lapping waves and the rough rubble of the levee, but at the left the gaze falls

Photo by the Author.

WHERE THE PROTHONOTARY NESTS.
A NESTING HOLE APPEARS IN THE FOREGROUND IN THE CENTRAL PANEL.

upon a veritable fairy dell of woods and water, which even a Prothonotary Warbler will go far to see. The seepage through the levee furnishes the surrounding area with about two feet of standing water, at a level substantially twenty feet below that of the main reservoir. Here the essential characteristics of a southern swamp are reproduced,—tiny islands, verdant at the water's edge, but bristling with willow stubs and weighted with decaying tree trunks; dark, oozy channels and uncertain depths between; and a high wall of half open forest all about. Here above the ringing chorus of a bright May morning one hears the high droning of the monarch, *swick, wick, wick, wick, wick.* Downy Woodpeckers have prepared the way, so generously, in fact, that one peers into a half dozen likely-looking holes before coming upon one, three or four feet above the water, which contains a heavy cushion of moss and grass and horse-hair, upon which rest five or six large heavily-colored eggs. Or else a natural cavity is found in some hollow limb, in which case an immense amount of material is required to fill up the space to within a moderate distance of the top.

The Prothonotary Warbler is, so far as known, the only one of the family to build regularly in holes in trees. We infer that it has drifted into this custom within zoologically recent years, since its eggs are unusually dark colored, while those of all strictly hole-nesting birds are pure white. The eggs of this Warbler exhibit two types of coloration, with, of course, every variety of intermediate form. Those of the first type are heavily and rather evenly spotted and dotted with dull brown, and show pale lavender shell-marks. The other sort are boldly blotched with reddish brown, so heavily at times that the ground color is nearly obscured.

According to Professor Butler, the females construct the nests and perform all the duties of incubation. A few days are allowed to elapse after the completion of the nest before laying begins. An egg is laid each day until the set is complete, and two broods are often reared each season, especially southerly.

During the mating season the males are exceedingly irascible. One hapless wight I saw, who, choosing the wrong platform for his song, was set upon vigorously by a jealous rival. At the first onslaught the pair fell fighting to the ground. They picked themselves up hastily, and one, probably the original assailant, chased the other about for as much as three minutes. In and out they wound, now coming straight toward one like golden bullets, now threading the mazes of a tree-top like flashes of fire. But the fugitive was plucky, too, after a fashion, and altho he thought of nothing but flight, it was always within the bounds of the disputed territory. Finally the chase languished somewhat, and I left the contestants, faint yet pursuing.

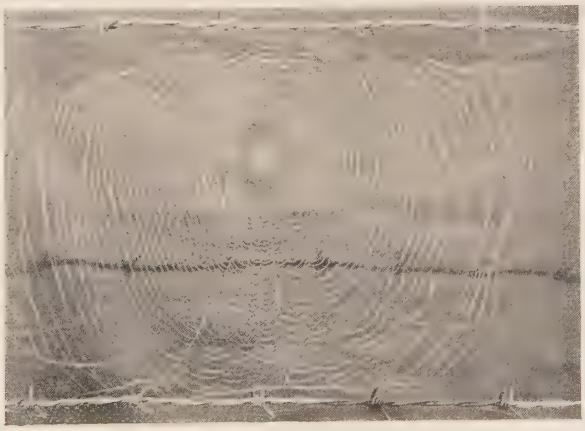

Photo by C. H. Morris.

No. 52.

WORM-EATING WARBLER.

A. O. U. No. 639. **Helmitheros vermivorus** (Gmel.).

Description.—*Adults*: Head striped above; a narrow black stripe from either nostril, broadening behind; and a stripe of the same color through either eye; alternating stripes, and sides of head dingy buff; remaining upper parts dull olive; below dingy buffy, brighter on breast; bill dusky above, pale below; feet pale. Length 5.50 (139.7); wing 2.86 (72.6); tail 1.91 (48.5); bill .58 (14.7).

Recognition Marks.—Medium warbler size; black and buff stripes on head; dingy coloration.

Nest, on the ground, often sheltered by bush clumps, roots, projecting stones and the like; of leaves, bark, and trash, lined with grass, moss, or hair. *Eggs,* 4-6, of variable shape, white, lightly or heavily spotted and blotched with lavender and chestnut. Av. size, .68 x .54 (17.3 x 13.7).

General Range.—Eastern United States, north to southern New York, and southern New England, west to eastern Kansas and Texas; south in winter to Cuba and northern South America. Breeds throughout its United States range.

Range in Ohio.—Not uncommon summer resident in southern and southeastern Ohio. "Ranges northward in eastern portion to and including Cuyahoga and Ashtabula Counties" (Jones).

DAMP woods, shady hillsides, and heavy undergrowth are required to attract this modest Warbler even in the southern part of our state, where alone it is common. Here the bird glides about over fallen logs, scuttles under brush-heaps or projecting stones, scratches vigorously among the fallen leaves, or clambers about the bushes, pursuing always a relentless search for the spiders, grubs, and worms, which form its almost exclusive diet. It is mainly a silent bird, and apart from nesting considerations regards your intrusion into its dusky haunts with little concern. Given, however, a sitting mate, or babies in the vicinity, and the bird's expostulations are most emphatic. *Chip—chip—chip,* it says with an energy which shakes the little frame; and presently every bird on the hillside joins in berating you.

There is little danger, however, for the bird. The nest is lodged somewhere upon the hillside, half buried by festoons of running vines and mosses, or else tucked away under the shadow of a log amidst a riot of dead leaves. Mere search is useless. The bird will guide you to her nest—perhaps. If not, why try again next year.

If caught upon the nest the bird sits close and braves the threatening hand, or else flutters out and tumbles down the hill with every symptom of acute and most inviting distress. Of course the distress is only mental, and the invitation is withdrawn in the nick of time.

The nest consists of a copious swathing of bark-strips and dead leaves, open at the top or side, according to the nature of the ground, and carefully lined with fine grass, hair, or moss.

Upon one occasion only does the Worm-eating Warbler avail himself freely of the more elevated perches which his forest home affords. In singing the bird mounts a limb twenty or thirty feet high and pours forth a torrent of notes not unlike those of the Chipping Sparrow. So close is the resemblance that one is almost sure to be deceived by them the first time; but closer attention discloses their more rapid utterance and somewhat finer quality. One individual heard near Sugar Grove wound up his trill with an odd musical quirk quite out of character, and which he had borrowed, I fancy, from a Hooded Warbler nesting near.

Taken in Morgan county. *Photo by the Author.*

THE HAUNT OF THE WORM-EATING WARBLER.

No. 53.

BLUE-WINGED WARBLER.

A. O. U. No. 641. **Helminthophila pinus** (Linn.).

Synonym.—BLUE-WINGED YELLOW WARBLER.

Description.—*Adult male*: Forehead and fore-crown bright yellow with a tinge of orange (Indian yellow); sides of head and entire under parts, except crissum, rich lemon yellow; a black line through eye; wings and tail bluish ash over dusky; tips of middle and greater coverts white, the former with yellowish tinge; three outer pairs of tail-feathers blotched with white on inner webs; remaining upper parts bright olive-green, clearest and with most yellow on rump; crissum white. *Adult female*: Similar but with yellow of head restricted to forehead; under parts paler yellow; bill blackish; feet dark brown. Length about 4.75 (120.6); wing 2.37 (60.2); tail 1.72 (43.7); bill .41 (10.4).

Taken near Oberlin. *Photo by the Author.*

THE BLUE-WINGED WARBLER'S DOMAIN.

THE NEST SHOWN IN THE FOLLOWING ILLUSTRATION OCCUPIES A POSITION NEAR THE CENTER.

Recognition Marks.—Smaller; yellow on forehead and below; *bright* olive-green above; black line through eye; white wing-bars and smaller size as distinguished from the Prothonotary Warbler.

Nest, on the ground, at edge of thicket or black-berry patch, of leaves, grape-

vine bark, etc., lined with fine grass. Eggs, 4 or 5, white, faintly and thinly speckled with cinnamon-brown or umber. Av. size, .63 x .51 (16. x 13.).

General Range.—Eastern United States from southern New York, southern New England and southern Minnesota southward, west to Texas and Nebraska. In winter south to Guatemala and Nicaragua.

Range in Ohio.—Of general distribution in summer throughout the state.

ALTHO appearing in our latitudes as early as May first, the Blue-winged Yellow Warbler seems to bring summer with it. This is partly because its bright plumage suggests the fullest measure of sunshine, but more because its drowsy, droning song better befits the midsummer hush than it does the strife of tongues which marks the May migrations. *Swe-e-e-zze-e-e-e-e-* the bird says, and it is as if the Cicada had spoken. The last syllable especially has a vibrant clicking quality like the beating of insect wings.

Like most warblers this bird makes nice discriminations in the choice of its summer home. If one knows exactly what sort of cover to look for it is not difficult to locate a Blue-wing, but one might ransack a township at haphazard and find never a one. Low, moist clearings which have been allowed to fill up again with spice-bush, witch-hazel, and saplings are favorite places, especially if here and there a larger tree has been spared, from which the singing Warbler may obtain at will a commanding

Taken near Oberlin. *Photo by Lynds Jones.*

NEST AND EGGS OF BLUE-WINGED WARBLER.

view. When suited to a "t" the bird will buzz into the late hours of the morning, when other songsters are silent.

Active and sprightly in habit, in spite of its tranquilizing song, the Blue-wing is seen to best advantage when nest-hunting or nest-building. Selecting a promising spot the bird will approach it by degrees, first dropping down some sapling ladder, rung by rung, until the lowest branch is reached; thence flitting to the top of a bush-clump, and descending in like manner to the ground. Here diligent inspection is made about the roots of the bush, the leaf supply, drainage, and cover being duly considered. If the outlook is promising the mate is summoned and the situation reconsidered.

The nest is placed upon the ground or upon the trash which covers it, and is usually so surrounded by descending stems as to be well hidden and quite secure. It is made out of rather coarse materials,—principally grape-vine bark and dead leaves,—bulky and deep, with ragged or indefinite edges, and often boasting nothing better than finely shredded bark for a lining. The female is a close sitter and may not infrequently be taken by the hand.

In June, 1902, I found a typical Chat's nest placed four feet high in blackberry vines, but which contained three tiny eggs of uniform size, quite like those of the Blue-winged Yellow Warbler. In response to my "screep" of inquiry a Blue-wing promptly appeared, not once only but twice, and scolded me roundly; while a Chat joined in at twice the distance. I was thoroughly puzzled, baffled; it was impossible to tell from the appearances which bird owned the eggs. Moreover my time was short. "When in doubt take the nest." The set is now in the Oberlin College collection, but we shall never know whether to label it "Chat" or "Blue-wing."

No. 53, H.

BREWSTER WARBLER.

A. O. U. No. H. 21. **Helminthophila leucobronchialis** (Brewst.).

Description.—*Adult male*: More or less like *H. pinus* (i. e. forehead and forecrown pure yellow, a black line through eye, etc.), but upper parts bluish gray (instead of olive-green); the wing-bars yellow; under parts pure white, tinged on breast only with yellow and on sides with ashy gray. In the fall more heavily washed with yellow below, and margined with olive-green above. *Adult female*: Like the male, but yellow of crown not so bright; wing-bars usually white.

Taken near Oberlin. *Photo by the Author.*

A HAUNT OF THE BREWSTER WARBLER.

The status of this bird is not yet fully determined. It may be a color phase of *H. pinus* or a hybrid between *H. pinus* and *H. chrysoptera* or possibly a nascent species. Certain it is that its affinities are strongly with *H. pinus*. Upon this point Ridgway's note is at least suggestive and perhaps solvent, "This puzzling bird apparently bears the same relation to *H. pinus* that *H. lawrencei* does to *H. chrysoptera*. In a large series of specimens every possible intermediate condition of plumage between typical *H. pinus* and *H. leucobronchialis* is seen, just as is the case with *H. chrysoptera* and *H. lawrencei*. If we assume therefore that these four forms represent merely two dichroic species, in one of which (*H. pinus*)

the xanthochroic (yellow) phase and in the other (*H. chrysoptera*) the leucochroic (white) phase represents the normal plumage,—and admitting that these two species in their various conditions, hybridize (which seems to be an incontrovertible fact),—we have an easy and altogether plausible explanation of the origin of the almost interminably variable series of specimens which have found their way into the waste-basket labelled *H. leucobronchialis.*"

IN the spring of 1903 four individuals of this puzzling form, all singing males, were observed near Oberlin. The first one seen haunted the same spot—a little opening in a thicket of tall saplings—in which we had closely studied a Golden-winged Warbler the previous season. His song too reminded us strongly of the other bird, except that he usually sang three notes, *Swee-zee-zee*, where the other had always given four, *Zwee, zee, zee, zeet.* Another Brewster in a wood three miles removed exhibited the same peculiarity; while a third seen in the "Old South" woods with the first, rendered a typical Blue-wing song of two drawling syllables. Here on another occasion a Blue-wing and a Brewster were seen chasing each other about through the smaller trees, and their excited songs hinted strongly of rivalry in love.

The case of the Brewster Warbler is very perplexing—delightfully so—but there is no reason why it should not find its solution here in Ohio.

No. 54.

GOLDEN-WINGED WARBLER.

A. O. U. No. 642. **Helminthophila chrysoptera** (Linn.).

Description.—*Adult male*: Above and on sides bluish gray; a crown-patch, including forehead, and a large patch on the wing, formed by tips of median coverts, and outer webs of greater coverts, bright yellow; a black patch through eye, including lore and ear-coverts, separated from crown by a narrow, and from throat by a wide, white stripe; throat black, broadening below; remaining under parts white, tinged more or less with blue-gray; rest of wing and tail dusky, with narrow blue-gray edgings; three outer pairs of tail-feathers with white blotches on the inner web; bill slender, acute, blackish; feet dark brown. *Female*: Like the male, but crown duller, and black of cheeks and throat partially obscured; touched with bright olive above, especially on margins of inner quills. *Immature*: Like female. Length 5.00-5.25 (127.-133.3); wing 2.54 (64.5); tail 1.87 (47.5); bill .44 (11.2). This bird crosses freely with the preceding species, *H. pinus.* See description of preceding form, also *H. lawrencei* in Appendix A.

GOLDEN-WINGED WARBLER
Helminthophila chrysoptera
Life-size

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Recognition Marks.—Medium size; bright yellow crown and wing-patches, and black throat.

Nest, much like that of the commoner *H. pinus,* on the ground or just above it, in tussock or weed clump, of leaves, grass, etc., lined with fine grasses. *Eggs,* 4-6, white, spotted and dotted, chiefly about larger end, with chestnut, umber and lilac-gray. Av. size, .62 x .49 (15.8 x 12.5).

General Range.—Eastern United States north to southern New England, southwestern Ontario, and southern Minnesota, breeding from northern New Jersey and Northern Ohio northward, and southward along the Alleghanies to South Carolina, Central America and northern South America in winter.

Range in Ohio.—Rare summer resident, in northern, locally common in southern portions of state.

Photo by the Author.

AT THE MOUTH OF DOUDA RUN—"MORGAN COUNTY'S BEST."

THE first glimpse of a new Warbler is always memorable, but an introduction to this dashing young fellow is especially so. You may have looked for years in vain, when suddenly one May morning you come upon him in the swampy woods, restless, full of life, and in the highest spirits. The young hickories are just about to open their reluctant palms; the gallant mounts a high bud, throws back his head, and sputters out *Zee, zee, zee, zee,* at double time in comparison with his drowsier relative, the Blue-wing. Without waiting for applause he charges after a vagrant fly, snaps him up, and takes to a sweet-smelling spice-bush for another round of music. A passing

Vireo, who by the way was born thereabouts, is fiercely assailed by the swaggering stranger, and retires in confusion. What impudence! you exclaim with rising resentment. But not so fast! A coy female, smartly dressed, if not so brightly as her mate, hops up out of a brush pile. The adoring lover darts to her side, but she avoids him through a hazel thicket, and he sets off in hot pursuit. Ho, ho! you chuckle; so that's the secret. Happy fellow!

Taken in Morgan County. *Photo by C. H. Morris.*

GOLDEN-WINGED WARBLER AT NEST.

After a merry chase the birds suddenly bethink themselves what effect your presence may have upon their future plans and join in berating you by energetic *swits*. If you are inconsiderate enough to intrude a few days later, you will find the nest where you have found the Blue-wing's, at the base of a bush clump, and its five eggs reposing in a rude half-sphere of leaves, bark-strips and grasses.

The Golden-winged Warbler is quite irregular in distribution, and varies unaccountably from year to year. While it is always rare in most localities, certain are reported where it is always to be found. The nest shown in the illustration occupied a central position in the copse beyond the fence in "Morgan County's Best"; and Messrs. Morris and Arrick feel that they are sure of finding the species there each season.

No. 55.

NASHVILLE WARBLER.

A. O. U. No. 645. **Helminthophila rubricapilla** (Wils.).

Description.—*Adult male*: Head above and on sides bluish ash, with a partially concealed bright chestnut crown patch; a whitish eye-ring; remaining upper parts bright olive-green; wings and tail dusky without distinct white, but with whitish edgings on inner, and olive-green edgings on outer webs; below, bright yellow, including crissum, whitening on belly; bill small, short, acute, blackish above, brownish below; feet brown. *Female*: Like male but somewhat duller below; ashy of head less pure, glossed with olivaceous; chestnut crown-patch less conspicuous or wanting. *Immature*: Olive-green without ashy above; below dull olive-yellow, clearing on belly and crissum. Length 4.25-5.00 (108.-127.); wing 2.34 (59.4); tail 1.66 (42.2); bill .38 (9.7).

Recognition Marks.—Smaller; yellow under parts usually clearer and brighter than in *H. celata*, and more extensive than in any other species unmarked below. Head contrasting more or less with back, as further distinguished from succeeding species.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground in second growth thickets and brushy pastures, of bark-strips, leaves, moss, etc., lined with fine grasses and rootlets. *Eggs*, 4 or 5, white or creamy-white, thickly speckled, chiefly about larger end, with rufous-brown or lilac. Av. size, .64 x .46 (16.3 x 11.7).

General Range.—Eastern United States to the Plains, north to the Fur Countries, breeding from the northern United States northward. Mexico and Guatemala in winter.

Range in Ohio.—Common migrant throughout the state.

ALTHO rightly accounted common during the migrations, this trim little Warbler is by no means obtrusive and may easily pass unnoticed except by the closest observers. It is a rather leisurely traveler, spending with us about two weeks in spring and requiring twice as much time to pass in fall. In spring it shows preference for young, second-growth timber and moist brush-lots, but is not uncommon in the tree-tops, especially on the border of the woods. On the autumn passage they are lured by the abundance of

rank weeds into more open situations. The birds appear to know instinctively how well their colors harmonize at that season with the massing golden-rod and the sere leaves of the wayside willow.

During the vernal movement the males are in full song, and the quality of their notes has given rise to much learned discussion. The aggregate of testimony goes to show that the song appears in two phases, and that the two are frequently combined in various proportions in one utterance. The second phase, or phrase, as the case may be, closely resembles the trill of the Chipping Sparrow, while the first is likened to the song of the Yellow or Chestnut-sided Warbler or—more appropriately, I think—to that of the Black-and-White. Mr. Minot, having in mind the Warbler type, hears, *wee-see, we-see, wit-a-wit-a-wit.* Rev. J. H. Langille combines both as *ke-tse, ke-tse, ke-tse; chip-ee-chip-ee-chip-ee-chip.* While Professor Jones represents "the more Chippy-ward song" by *"k-chip; k-chip; k-chip; k-chip; che-che-che-che."* Of course the use of comparisons at all implies that the notes are among the lesser known and less distinctive woodland sounds.

No. 56.

ORANGE-CROWNED WARBLER.

A. O. U. No. 646. **Helminthophila celata** (Say).

Description.—*Adult*: Above ashy olive-green, clearing and brighter on the rump; crown with patch almost concealed, of orange-red (Saturn red) feathers; wings and tail fuscous with some olive edging; below greenish-yellow, dingy or vaguely streaked with olive on breast and sides. *Immature*: Without orange of crown; more ashy above; duller below; eye-ring whitish. Length about 5.00 (127.); wing 2.40 (61.); tail 1.95 (49.5); bill .42 (10.7).

Recognition Marks.—Small warbler size; orange crown-patch is distinctive, but seldom seen in life; under parts duller and greener than last, not so white as next species; no contrast between general color of head and back.

Nesting.—Does not breed in Ohio. *Nest,* on the ground among clumps of bushes, of coarse strips of bark, grasses, and plant-stems, lined with fur and hair. *Eggs,* 4-6, white or creamy-white, finely speckled with reddish brown, and with fainter markings of purplish slate (Kennicott). Av. size, .64 x .46 (16.3 x 11.7).

General Range.—Eastern North America, breeding as far north as the Yukon and Mackenzie Rivers and southward through the Rocky Mountains; wintering in the South Atlantic and Gulf States and Mexico. Rare east of the Alleghanies, north of Virginia.

Range in Ohio.—Rare spring and fall migrant.

H. *celata* is one of the rarer migrant Warblers, of which comparatively little seems to be known. In its breeding haunts, which extend up to well within the Arctic Circle, it is found to be a bird of the undergrowth and open thickets; but during its migrations it is at least as likely to be seen in the tree-tops along with the stricter denizens of the woods. A few of us report seeing the species every year or so, and a conscientious shot every fourth year confirms the record.

Dr. Wheaton once came upon a male in full song. He describes the notes as loud, emphatic, and rather monotonous, consisting of the syllables, *chicky-tick, tick, tick, tick.* Professor Lynds Jones renders the song, *chee, chee, chee, chw, chw,* and says that the first three syllables are rapidly uttered and the last two more slowly.

No. 57.

TENNESSEE WARBLER.

A. O. U. No. 647. **Helminthophila peregrina** (Wils.).

Description.—*Adult male*: Crown and sides of head bluish ash fading into whitish of throat; above bright olive-green; wings and tail dusky with faint edgings of olive-green; outer tail-feathers sometimes show obscure whitish spot near tips; upper eyelid, or faint superciliary line, whitish; below dull white, often washed more or less on throat, breast and sides (especially the last) with sordid yellowish. *Adult female*: Similar; ashy of head veiled by olive-green skirtings; more yellow below. *Immature*: Crown and back clear olive-green; under parts washed with yellow, except on under tail-coverts. Length 4.50-5.00 (114.3-127.); wing 2.53 (64.3); tail 1.65 (41.9); bill .40 (10.2).

Recognition Marks.—Small warbler size. Another nondescript,—sordid white or pale yellowish below; white of belly usually unmistakable.

Nesting.—Does not breed in Ohio. *Nest,* in low bushes near ground, of vegetable fibers, grasses, etc., lined with hair. *Eggs,* pearly white with wreath about larger end of brown and purplish spots. Av. size, .60 x .56 (15.2 x 14.2).

General Range.—Eastern North America, breeding from northern New York and northern New England northward to Hudson Bay Territory; in winter south through eastern Mexico to Costa Rica and California.

Range in Ohio.—Common during spring and fall migrations.

LIKE the Nashville Warbler, this bird of the far north owes its name to an accident of discovery. Wilson first found it on the banks of the Cumberland in Tennessee, and promptly named it after their common hostess. Both Wilson and Audubon regarded the bird as extremely rare, the former having seen but two specimens and the latter three. It is known now as one of our common migrants in the middle West, but its first positive recognition in the case of any individual observer is usually effected by the aid of a gun. Altho bright olive-green might be reckoned on first thought a conspicuous color, it is precisely the opposite when viewed among the tender greens of May, or amidst the changing foliage of autumn.

The Tennessee Warbler is a rather late and leisurely migrant. It does not appear in spring until the leaves are at least half way out, usually about the end of the first week in May; and at that season it keeps to the densest cover in woodland or orchard trees. But once learn its song and the rest is easy. Its voice can readily be distinguished in a May-day chorus, but it is not averse to musical effort on dull days, and then is your best chance. A dull canopy of cloud, it may be, covers the sky. It is not raining, but the face of nature is bathed in an atmosphere heavy with warm moisture, and the apple trees gratefully suck up the nourishment and throw out their foliage and blossoms visibly before your eyes. Suddenly from the midst of some bower of blossom not so far removed but glowing softly down the orchard isle of tenuous vapor, there bursts a fine note of inquiry, the prelude of a series which rises rapidly to a peremptory challenge, *Pichick', pichick', pichick', chick, chick, chip, chip, chip.* The song is delivered in a rapid crescendo up to the last note, but with this the bird suddenly checks himself. If you advance, the bird quits his bower for some other flower-hold as difficult, and the chances are against your catching anything but a dull yellowish glimpse. You cannot see him, but you have heard and that is enough.

In the fall, strange to say, the birds not only seem much more plentiful, but they quit the woods and resort almost exclusively to wayside thickets, second-growth clearings, and the like. At this season too they are much more approachable. Either they are less suspicious now that the love-sickness is over, or else they trust more implicitly to the protection of the sere leaf.

No. 58.

NORTHERN PARULA WARBLER.

A. O. U. No. 648a. **Compsothlypis americana usneæ** Brewster.

Synonym.—BLUE YELLOW-BACKED WARBLER.

Description.—*Adult male*: Above and on sides of head and neck grayish blue; a large greenish golden patch on back; wings and tail dusky with obscure bluish bordering; tips of middle and greater coverts white, forming two conspicuous bars; two outer pairs of tail-feathers with white blotches on the inner webs; lores broadly bluish black; a white spot on lower eyelid; chin and breast yellow,—connection almost cut off by encroaching blue of sides; a blackish or blue-black dab on lower throat; below this, in turn, a rich orange-brown patch, each feather with a yellow tip, producing a shingled effect, below sordid white. *Adult female*: Similar but the orange-brown and black of throat often absent; paler everywhere. *Young of the year*: Upper parts tinged with olive-green, thus giving a peculiar blue-green effect, especially on head; yellow of lower parts paler. Length of males about 4.75 (120.6); wing 2.38 (60.6); tail 1.67 (42.5); bill .38 (9.7)[1].

Recognition Marks.—Smallest of American Warblers (*usneae* is however the largest of the three allied forms); golden patch on back; the orange-brown on the breast of high plumage male is distinctive.

Nest, a pouch, formed oftenest of a bunch of pensile moss (Usnea), or high water debris, gathered together at the bottom, felted, and carefully lined, and with entrance at side. *Eggs,* 4 or 5, sometimes 6 or 7, glossy white or creamy white, speckled with cinnamon-red, chestnut, and gray, usually in a wreath about larger end. Av. size, .66 x .47 (16.8 x 11.9). The breeding bird is perhaps the next form, *C. a. ramalinae.*

General Range.—New England, New York and westward at least to Long. 82°, and north into the Maritime Provinces and Ontario, migrating southward beyond the United States in winter.

Range in Ohio.—Rather rare during migrations.

A recent overhauling of this genus by one of the masters has left us in temporary uncertainty regarding the Ohio forms, but it seems altogether probable that the larger bird is strictly migrant. Dr. Wheaton, relying upon the observations of Messrs. Read and Kirtland, gives the Parula Warbler as a summer resident in northern Ohio. More recently Thomas McIlwraith in his "Birds of Ontario," states that he has not heard of a nest's being found in that province, since the majority of the birds pass still farther north to breed. More lately still they have been found breeding by Fleming in the districts adjoining Georgian Bay. No recent records of breeding are at hand from the northern part of this state, and it would appear at least possible that the more robust form has pushed its way further northward

1 Measurements of all but length are from Ridgway. See "The Birds of North and Middle America," part II, p. 484.

since Kirtland's time, leaving a hiatus between the two subspecies, which at present consists of northern Ohio and southern Ontario. If closer attention discovers breeding birds in the northern part of the state, they will probably prove to be *avant couriers* of the southwestern bird, *C. a. ramalinæ*.

No. 59.

WESTERN PARULA WARBLER.

A. O. U. No. 648a, part. **Compsothlypis americana ramalinæ** Ridgway.

Description.—Similar in coloration to *C. a. usneae*, but averaging somewhat smaller. Length of male 4.40 (111.7); wing 2.26 (57.5); tail 1.61 (40.9); bill .39 (9.9). Recently elaborated by Ridgway but status and distribution not yet clearly defined.

General Range.—Locally distributed throughout the Mississippi Valley and its tributaries, west to the Plains, north to Canada, and east to western Ohio and Michigan.

Range in Ohio.—Believed to be the breeding bird; nowhere common but generally distributed.

DURING the spring migrations the Parula Warbler is the most restless midget of all that motley host which throngs the tree-tops. One tries in vain to catch him at rest, if but for the fraction of a second, that he may feast his eyes upon those rare beauties. But no; the little body is swayed by a thousand passions, and each movement must do duty for an hour. It is both moving-time and mating-time, and to see him bustling about in such a mighty flurry one guesses that Chaucer's lines must be true of him:

> "So hote he lovede that by nightertale
> He sleep namore than doth the nightingale."

Arrived, however, upon the summer camping ground and secure in his mistress's affections, our hot lover becomes much more sedate. One observed closely at McConnelsville in May, 1903, moved about with great deliberation, stopping for several minutes at a time upon a given twig, where he sang at frequent intervals. The song consisted of distinctly syllabized *z* notes, winding up with a squeak of an entirely different character, *Zu zu zu zu zuee tsip*. The whole was of a hair-like fineness, and had no great carrying power.

During the same season in the wooded hills about Sugar Grove I saw parents leading about full-grown young on the 10th of June. In the overflow

of the Crystal Spring, so well known to Columbus picnickers, we saw a Parula taking a noonday bath. The bird permitted a close approach during his icy ablutions. After this, upon a couch of tangled vines, he took a sun-bath in leisurely fashion, preening, and shaking himself now and then until he looked like a little blue and yellow pincushion. Then he whisked into a tree-top and was lost in a trice.

Taken near Sugar Grove. *Photo by the Author.*

VIEW LOOKING WEST ACROSS THE HOCKING RIVER.

PARULAS NEST IN THESE WOODED HILLS.

In nesting, the Parula makes artful use of bunches of moss, or even drift material left by a receding freshet. The moss is caught up and woven into a pendulous subspherical mass, or if bulky enough already, the bird may simply pull and pry and excavate a convenient hollow. Again the nest may be entirely constructed of materials laboriously gathered. A writer in Pennsylvania, Mrs. T. D. Dershimer, reports two such nests in hemlock trees.

No. 60.

CAPE MAY WARBLER.

A. O. U. No. 650. **Dendroica tigrina** (Gmel.).

Description.—*Adult male*: Crown in high plumage black, usually olive-skirted; back olive-green streaked obscurely with black; rump yellow; wings and tail dusky with olive-green edging; a large white patch with olive skirtings on wing, formed by lesser and middle coverts; two or three outer pairs of tail-feathers broadly blotched on the inner web; ear-coverts and space below eye orange-brown contrasting with clear yellow of hind neck and sides of throat; a yellow superciliary line often tinged with orange-brown; a line through eye black; below yellow heavily streaked with black except on chin, sides of throat, and lower tail-coverts; lower belly and crissum whitish; bill blackish, acute, slightly curved; feet dark brown. *Adult female*: Duller; without distinctive head markings; white wing-patch much restricted; dull yellow or dingy white below, streaked with black, more narrowly and less extensively than in male. *Adults in fall*: Entire plumage more or less obscured by olive-gray suffusion. *Immature male* like spring female but with more white on wing. *Immature female* like adult but whitish instead of yellow below. Length 5.00-5.25 (127.-133.3); wing 2.62 (66.6); tail 1.80 (45.7); bill .40 (10.2).

Recognition Marks.—Medium size; ear-patches orange-brown; bright yellow on sides of neck; yellow with black stripes below (something as in *D. maculosa,* but the contrast between the colors not so sharp; the streaks more numerous and not so clearly confluent in stripes).

Nesting.—Not known to breed in Ohio. *Nest,* semi-pensile, of small twigs and grass interwoven with spider-webs, and carefully lined with horse-hair. *Eggs,* 3 or 4, dull white, speckled and spotted with dark brown and lilac-gray, chiefly gathered in wreath about larger end. Av. size, .69 x .49 (17.5 x 12.5).

General Range.—Eastern North America north to Lake Winnipeg and Hudson Bay Territory, west to the Plains. Breeds from northern New England northward; winters in the West Indies.

Range in Ohio.—Comparatively rare,—during migrations only.

THERE are two particularly interesting things about the Cape May Warbler, and that which excites our interest is that it is one of the rarer warblers. One may study the warbler host for several years without meeting this bright-colored little fellow, and then be rewarded with an unexpected meeting with several of them in fullest plumage. I have found them in orchards more than elsewhere, helping the owner prepare for a rich harvest of fruit because the insect eggs are found and destroyed. A troop of warblers is worth barrels of emulsion. Ely Wood, Elyria, has also proved a good place for the Cape May. Six were found in one company last year, in the shade trees along the street.

YELLOW WARBLER
Dendroica aestiva
3/5 Life-size

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The other thing of peculiar interest is that this warbler has a cleft and fringed tongue, and has been called Perissoglossa. Just what the function of this pattern of tongue may be is a puzzle, but that it is in some way useful to the birds can hardly be doubted. It is certainly not an aid to singing, for this warbler is one of the weaker voiced ones, with a high pitched, wiry song, spelled *"a-wit, a-wit, a-wit,"* by Mr. Butler. The song is given while the bird is feeding, and is a sort of accompaniment to the real business of life during the northward journey. In my experience this warbler is unwary and permits a close approach. I have never seen it at a greater height than twenty feet in the trees and bushes.

The migrations have not been well worked out yet, but what we know about the movements across Ohio would indicate a northward movement during the first half of May, and a southward return during August and early September. The persistent student of the migrations is sure to find Cape May sometime under favorable conditions for study.

The nest is built in a low bush in a wooded pasture or open woodland, and is said to be partially pensile. The nest and eggs are not readily distinguishable from other members of this genus. The males sing frequently from their perch on the topmost twig of a spruce tree, and so mislead one as to the whereabouts of the nest. In the United States nests will be found only in northern New England and northern Michigan, Wisconsin and Minnesota, except in the mountains. LYNDS JONES.

No. 61.

YELLOW WARBLER.

A. O. U. No. 652. **Dendroica æstiva** (Gmel.).

Synonyms.—SUMMER YELLOW-BIRD; SUMMER WARBLER.

Description.—*Adult male*: Forehead and fore-crown bright yellow with an orange tinge; back bright olive-green; rump greenish yellow; wings and tail blackish with greenish yellow edgings, the wing quills edged on both webs, the tail-feathers—except middle pair—almost entirely yellow on inner webs; sides of head and entire under parts golden yellow, the breast and sides heavily streaked with chestnut; bill black; feet pale. *Adult female*: Like male but duller; olive-green on back, not brighter on forehead; paler yellow below, obscurely or not at all streaked with chestnut. *Young males* resemble the adult female. *Young female* still duller; dusky yellow below. Length 4.75-5.25 (120.6-133.3); av. of five Columbus specimens: wing 2.51 (63.8); tail 1.68 (42.7); bill .40 (10.2).

Recognition Marks.—Medium size; golden yellow coloration; chestnut streaks on breast of male; the commonest of the resident warblers.

Nest, a compact cup of woven "hemp" and fine grasses, lined heavily with plant-down, grasses, and, occasionally, horse-hair, fastened to upright branch in rose-thickets and the like. *Eggs,* 4 or 5, white, bluish-, creamy-, or grayish-white, speckled and marked with largish spots of reddish brown, burnt umber, etc., often wreathed about the larger end. Av. size, .70 x .50 (17.8 x 12.7).

General Range.—North America at large, except southwestern part, giving place to *D. ae. rubiginosa* in extreme northwest. South in winter to Central America and northern South America. Breeds nearly throughout its North American range.

Range in Ohio.—Of universal distribution; the most abundant Warbler. Not conspicuous as a passing migrant.

Photo by R. F. Griggs.

FEMALE BROODING YOUNG.

THE Summer Warbler's gold is about as common as that of the Dandelion, but its trim little form has not achieved any such distinctness in the public mind. Most people, if they take note at all of anything so tiny, dub the birds "Wild Canaries," and are done. The name as applied to the Goldfinch may be barely tolerated, but in the case of the Warbler it is quite inappropriate, since the bird has nothing in common with a Canary except littleness and yellowness. Its bill is longer and slimmer, for it feeds exclusively on insects instead of seeds, and its pure yellow plumage knows no admixture, save for

the tasty but inconspicuous chestnut stripes on the breast of the adult male. These stripes are lacking in males of the second year, whence Audubon was once led to elaborate a supposed new species, which he called the "Children's Warbler." The name is not ill-fitting even tho we know it applies only to the Warbler children.

The Yellow Warbler is peculiarly a bird of sunshine, and is to be found anywhere in open situations. It swarms through the orchards and gardens, frequents the wayside thickets, and in town takes possession of the shrubbery in lawn or park. It is abundant in swampy places, and through the willows which line the banks of streams.

Taken near Waverly. *Photo by Rev. W. F. Henninger.*

NEST AND EGGS OF THE YELLOW WARBLER.

The song is sunny too, and while not elaborate, makes substantial contribution to the good cheer of spring. The notes are almost piercing and sound better perhaps from across the river than they do in the same tree. Individual variation in song is considerable, but the high pitch and vigor of delivery are distinctive. Certain common types may be syllabized as follows: *Sweet, sweet, sweet, sweetie; tsee, tsee, tsit-a-wee, tsee; wee-chee, chee, chee wee-i-u.* The bird is found singing from its arrival the last week in April until near the close of its second nesting late in July.

The nest of the Yellow Warbler is one of the commonest, both because of the bird's abundance and because no special pains is taken at concealment.

Nests may be placed at any height in orchard trees or willows, but without doubt the most acceptable nesting site is afforded by the dense swamp thickets of the Carolina rose. In a day's nesting in the Oak Point swamps of Lorain County, forty-two occupied nests of eight species were examined by myself and a companion, and of these eleven were Yellow Warbler's.

The cradle of this bird is an exquisite fabrication. The tough inner bark of certain weeds—called indiscriminately hemp—together with grasses and other fibrous materials in various proportions, is woven into a compact cup about, or settled into, some stout horizontal or ascending fork of bush or tree. As a result the bushes are full of Warblers' nests two or more seasons old. A fleecy lining or mat of plant-down is a more or less conspicuous feature of every nest. Upon this as a background a scanty horse-hair lining may exhibit every strand; or, as I once saw in Washington, the eggs themselves may be thrown into high relief by a coiled black mattress.

Taken at Oak Point. *Photo by the Author.*
AN UNUSUALLY DEEP NEST.

The Yellow Warbler displays particular ingenuity in banishing the Cowbird's unwelcome egg. Instead of deserting the spot the birds place a false bottom across the nest and raise the sides to correspond, — two stories, with the ground floor to let. Three- and even four-story nests of this sort have been found.

BLACK-THROATED BLUE WARBLER
Dendroica caerulescens
Life-size

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No. 62.

BLACK-THROATED BLUE WARBLER.

A. O. U. No. 654. **Dendroica cærulescens** (Gmel.).

Description.—*Adult male*: Above, dark dull blue, occasionally spotted with black on the back; extreme forehead, sides of head, chin, throat, sides of breast, and sides, intense black; remaining lower parts pure white; wings and tail blackish, edged on exposed portions with blue or whitish; a large white spot at base of primaries on both webs; secondaries and lower tertials broadly edged with white; three outer pairs of tail-feathers broadly but decreasingly blotched with white on inner webs; bill black; feet brown. *Adult female in spring*: Above dull greenish blue; no pure black anywhere; sides of head dusky; below white, sordid, or with a bluish buffy suffusion; white spot at base of primaries reduced but still prominent. *Adult female in autumn*: Similar but with more yellow everywhere; therefore dull olive-green above, dingy yellow below; brownish washed on sides. *Immature male*: Like adult male, but upper parts greenish; less black below. *Immature female*: Like adult female in autumn. *Adult male in winter*: Above touched with olivaceous; below black somewhat restricted; flanks touched with brownish. Length 4.75-5.50 (120.6-139.7); av. of five Columbus specimens: wing 2.53 (64.3); tail 1.86 (47.2); bill .39 (9.9).

Recognition Marks.—Medium size; black, dull blue, and white in masses of male; white spot at base of primaries in female.

Nesting.—Not found breeding in Ohio. *Nest,* of bark-strips, twigs, and grasses, lined with fine rootlets and horse-hair; placed in low bushes near ground. *Eggs,* 4 or 5, dull white, with spots and dots of olive-brown, chiefly wreathed about larger end. Av. size, .68 x .51 (17.3 x 13.).

General Range.—Eastern North America to the Plains, breeding from northern New England and northern New York northward to Labrador, etc. West Indies and Guatemala in winter.

Range in Ohio.—Common spring and fall migrant.

THE Warblers are a world unto themselves. When the semi-annual flood-tide of migration is at its height, nearly all available space is occupied by them as completely as tho no other sorts of birds existed. The spatial exceptions are the open fields where Sparrows reign supreme, and open water where none but web-footers and the Swallow kind may go. The portion which falls to the Black-throated Blue in the grand allotment consists of the lower levels in the deeper forests, together with an added gratuity of outlying evergreens wherever these may occur. Not but that the bird may appear as a visitor in the tree-tops, or even as an inquisitive tourist in swampy recesses, but these are not his home.

The clear-cut, modest color-masses of the male bird are enough to awaken enthusiasm in any beholder; but the totally different pattern of the female with her shifting olive-greens and dingy yellow, is apt to be confusing. The white

spot on the edge of the wing is not very conspicuous in the female, but once found it settles all dispute, however much imagination may rebel.

The Black-throated Blue Warbler is rather deliberate in movement, quiet and genteel. It is not very difficult to approach it, and a prudent observer may sometimes attain inspection at arm's length. In such cases, however, it is the bird that makes the advances. The surest opportunity comes when the bird has been seen in a front yard evergreen. Then the observer may approach quietly, while the bird, trusting to the density of the foliage, pursues intently his entomological researches, or even publishes his prosy song. *Dzwee, dzwee, dzweedt* comes in a matter of fact voice, or with a curious upward turn, from the depths of the foliage. The sounds are consonantal, hard, and deep, but not out of keeping with the bird's demure ways. On rarer occasions a sprightly and much more musical ditty is heard, *Chew, we-o, we-o, we-o, we-o, wich, i-wich, i-wich.*

This Warbler is common in spring but is even more noticeable in autumn, since it is one of the few species which do not don plainer garments. Its fall movement is leisurely and it finds a congenial companion in the dropping leaf.

No. 63.

MYRTLE WARBLER.

A. O. U. No. 655. **Dendroica coronata** (Linn.).

Synonym.—YELLOW-RUMPED WARBLER.

Description.—*Adult male in spring*: Above slaty blue with black streaks, smaller on sides of crown and nape, broader on back; below white, with black on upper breast, sides of middle breast, and sides in endless variety of patterns; a large patch on each side of breast, a partially concealed patch in center of crown, and rump, bright yellow (lemon or canary); superciliary line white; a deep black patch on side of head; wings fuscous; tail darker; middle and greater coverts narrowly tipped with white, forming two rather conspicuous bars; three outer pairs of tail-feathers with white blotches on inner webs, decreasing centrally; bill black; feet dark. *Female in spring, and both sexes in fall*: Duller; the blue of upper parts overlaid with brownish; a brownish wash on sides of breast and flanks; black of breast obscure,—restricted to centers of feathers; yellow of breast-spots pale or wanting. *Immature*: Brownish above; whitish below with a few obscure dusky streaks. Length 5.25-5.75 (133.3-146.1); av. of five Columbus males: wing 2.98 (75.7); tail 2.22 (56.4); bill .38 (9.7).

Recognition Marks.—Larger; the yellow rump together with size and season of appearance is distinctive; *white* throat, as distinguished from *D. auduboni.*

Nesting.—Does not breed in Ohio. *Nest,* of stalks, twigs, vegetable fibers, and grasses, lined with fine grasses or feathers, and placed five or ten feet up on horizontal branches of coniferous trees. *Eggs,* 4 or 5, dull or creamy white, speckled and spotted or blotched, chiefly about larger end, with reddish- or olive-browns. Av. size, .67 x .52 (17. x 13.2).

General Range.—Eastern North America chiefly, straggling more or less commonly to the Pacific; breeds from the northern United States northward, and winters from southern New England and the Ohio Valley southward to the West Indies, and through Mexico to Panama.

Range in Ohio.—Common in spring and abundant during fall migrations. Indies, and through Mexico to Panama.

Taken near Columbus. *Photo by the Author.*

"THE RISING SUN IS GREETED WITH A BURST OF VOCAL SPLENDOR."

WHEN the vanguard of the Warbler host arrives in later April, the bird-man knows it is time to overhaul the daily schedule, to decline with thanks all evening engagements, and to hie him forth in the gray of the morning to welcome his winged friends. The wind is still asleep, the dew is full-bodied and lusty, and sounds of traffic have not yet begun to burden the air. It is at such a time the birds confess their inmost secrets of love and longing, and sing purest praises to the great All-Father. As the signals of dawn are hoisted the chorus swells and the rising sun is greeted with a burst of vocal

Taken near Oberlin. *Photo by the Author.*

A FAVORITE WOODS-EDGE.

THE TREES ARE ONLY HALF DRESSED WHEN MYRTLE COMES.

splendor. Upon his appearance the winged voyageurs of the night descend, and mingle their lispings and trillings with the full tide of song.

The Myrtles are usually the first of the Warblers to arrive in the spring, as they are the last to depart in the fall. For a week they are abundant, and their sturdy *chip* becomes easily the most familiar of Warbler notes. Other enterprising Warblers not a few accept their promise of safe conduct, but one scrutinizes a dozen of the Myrtles to find one of another species. During the first ten days of May the order of abundance is reversed, and the last dilatory matron has disappeared or every lazy Black-poll comes.

Myrtle is a handsome fellow, but he is too sensible to put on airs. Trees, bushes or fence-rails are alike to him, and he is not above alighting on the ground to secure a fat grub. Now and then a pleasant song is heard, a dainty, silvery warble, rather light, and, one suspects, since the singer is so far from home, not full-voiced yet.

MAGNOLIA WARBLER
Dendroica maculosa
Life-size

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The autumnal movement is less hurried than that of spring. At this season the birds often gather in flocks of forty or more, and linger for weeks in sunny, half-wooded pastures, or about the orchards. Here they spend much time in the tall weeds, after the fashion of Goldfinches, hunting for insects, indeed, but in lieu of them often accepting seed. Thus they will occasionally tarry late into November, and do not fear the exposure resulting from the falling leaves, since a yellow rump-spot is all that is left them of the garish beauties of spring.

Yellow-rumped Warblers are reported as wintering commonly in southern Indiana, but Rev. W. F. Henninger did not find them in the lower Scioto valley. Dr. Langdon of Cincinnati has records for March 4 and November 29, and it is not improbable that they winter sparingly in the more sheltered spots of the Ohio River counties. They are reported as abundant at that season in Florida, where they subsist on the berries of the myrtle (*Myrica cerifera*), whence the name.

No. 64.

MAGNOLIA WARBLER.

A. O. U. No. 657. **Dendroica maculosa** (Gmel.).

Synonym.—BLACK-AND-YELLOW WARBLER.

Description.—*Adult male in spring*: Crown and nape slaty blue; back deep black; black bands on the sides of the head meeting in front and connecting with black of back; superciliary line, cut off by black in front of eye, white; a white spot on under eyelid; rump bright yellow shading into back by yellow or olive-green skirtings; upper tail-coverts abruptly black; wings and tail black with narrow edgings of bluish gray; a large white blotch on wing, formed by tips of middle, with tips and outer edges of greater, coverts; tail-feathers, except middle pair, with square white blotches on central third of inner web, below rich lemon yellow, clear on throat and middle belly, heavily streaked with black on jugulum, sides of breast, and sides, the streaks tending to become confluent in two or three large stripes on sides of breast, and to form a black patch on lower throat; crissum white; bill black; feet dark brown. *Adult female in spring*: Like male but duller; more olive-green on back; wing-patch separated into two bars by broader black centers of greater coverts; less heavily streaked below. *Both sexes in autumn*: Above olive-green; grayish on head; pale gray on throat; less heavily, or not at all, streaked below. *Young*: Ashy above with heavy olive skirtings on back and nearly concealed black spots; paler yellow below with less

streaking; rump and tail as in adult. Length 4.50-5.25 (114.3-133.3); wing 2.36 (59.9); tail 1.91 (48.5); bill .36 (9.1).

Recognition Marks.—Smaller; below, rich yellow heavily streaked with black in spring; *square* white spots on central third of tail feathers distinctive in any plumage.

Nest, of twigs, grasses and weed-stalks, carefully lined with fine rootlets, in coniferous trees, usually three to ten feet high on horizontal branches. *Eggs,* 3-5, white, spotted and blotched with hazel, reddish brown and cinnamon. Av. size, .65 x .48 (16.5 x 12.2).

General Range.—Eastern North America west to the base of the Rocky Mountains and casually to British Columbia; breeding from northern New England, New York, and Michigan, to Hudson Bay Territory, and southward in the Alleghanies to Pennsylvania. In winter, Bahamas, Cuba and south through eastern Mexico to Panama.

Range in Ohio.—Common spring and fall migrant. Perhaps rare summer resident in northeastern Ohio.

IT is always with a sense of privilege that one gazes upon a bird so beautiful, so exquisite as this. It is passing strange that one of such brilliant hue should desert the tropics and proceed not only to Ohio—that were not so strange—but to gloomy Labrador. Surely he must be a vision glorious in that land of fogs and pines and mosses gray! The bird brings with him something of the languid air of the South, a breath as of magnolia blossoms, and a southern name. For this bird like two other Warblers, the Palm and the Myrtle, receives its name from the favorite tree of its winter home.

While passing through our borders the Magnolia Warbler is oftenest found moving quietly through the bushes which line the banks of streams or lean over swampy pools in the depth of the forest. If in the latter situation its brilliance seems fairly to dispel the gloom, and if one finds His Magnificence fluttering before an insect-laden leaf, his cup of joy is full. But the bird is no recluse and numbers of them join that bright array which consecrates our tree-tops year by year.

The song of the Magnolia is not often heard, but when vouchsafed is clear and musical and fairly distinctive. It may bear a superficial resemblance to that of the Hooded Warbler, but careful comparison will show that it is shorter, weaker, and more varied. It is only the penultimate syllable, into which the bird throws a peculiar quality and turn, that is confusing, *flick, flick, flick, fleetip,* or *che-weech, che-weech, che-o.* Beside this common form there are many variations whose consideration would scarcely prove helpful.

Many years ago it was supposed that this bird could be found breeding

CERULEAN WARBLER
Dendroica rara
⅞ Life-size

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in the northern part of the state, and Dr. Wheaton cites the appearance of one individual near Columbus as corroborative. Since that time no decisive records have come in and it is probable that the "northward trend" has effaced this species from the list of breeding birds.

No. 65.

CERULEAN WARBLER.

A. O. U. No. 658. **Dendroica rara** (Wils.).

Description.—*Adult male*: Above and on sides of head, neck, and breast bright grayish blue (china-blue, scarcely "cerulean"), clearest on nape and rump; streaked with black on crown, back, and sides; lores black; below white, a narrow blackish band across chest (sometimes interrupted); sides of breast streaked with black, partially concealed and with bluish edgings; two narrow white wing-bars formed in the usual way; white blotches near end of all but central pair of tail-feathers, on inner web; bill and feet bluish black. *Adult female*: Above, bluish olive-green; below, pale greenish buffy or greenish yellow, clearing on throat and belly, and obscurely striped with back-color on sides; line over and behind eye greenish yellow or wanting; wing-bars and tail-spots like male. *Young*: Like adult female, but males bluer above and whiter below. Autumnal plumage of adults not different. Length 4.00-5.00 (101.6-127.); wing 2.67 (67.8); tail 1.73 (43.9); bill .40 (10.2).

Recognition Marks.—Smaller; azure-blue and white coloration of male; bluish-greenish-grayish olive of female. The latter may be distinguished from the female of *D. caerulescens,* the only one with which it is likely to be confused, by the two wing-bars and the tail-spots.

Nest, a compact structure of fine grasses held together by spiders' silk, and decorated externally with lichens; lined with strips of bark and fine grasses; placed from twenty to seventy feet high in deciduous trees, at some distance from trunk. *Eggs,* 4, creamy white, speckled and blotched, chiefly near the larger end, with chestnut and lilac. Av. size, .67 x .50 (17. x 12.7).

General Range.—Eastern United States and southern Ontario west to the Plains. Rare or casual east of central New York and the Alleghanies. In winter south to Cuba, southeastern Mexico, Central America, and western South America. Breeds from about latitude 35° north to Minnesota.

Range in Ohio.—Rather common summer resident throughout the state; more common as migrant.

THE first five days of May are pretty sure to be warbler days in northern Ohio. For seven years the Cerulean Warbler has appeared at Oberlin during these first five days, usually near the first, and he is always singing when he first appears. He nests in some numbers in Lorain county and elsewhere

in the woods over pretty nearly the entire state. His song ceases about the end of the first week in July, but he tarries well into September.

Taken near Sugar Grove. *Photo by the Author.*

THE SUMMER HOME OF THE CERULEAN.

Any quest for the Cerulean Warbler takes one into the deeper woods, where the growth has been crowded and rapid. High up among the interlacing branches, hidden by the dense foliage, he flits all the day long, gleaning

from the new leaves or sallying out into the open for some passing insect, singing in the intervals. The woods which he chooses must be damp underneath, and the trees tall. Undergrowth is no hindrance, but he seems to prefer as little of it as possible.

His song seems to echo the purpose of his life. Beginning, as it were, down among the lowly, it gradually but persistently rises, pointing the way upward, disappearing while yet rising toward the heights. He lives where he can reach down and uplift by his presence and a sunny, joyous nature. The song is not pretentious, calling for applause, but rather the expression of an earnest purpose. You will not hear it without close attention. It has been rendered "*tse, tse, tse, tse, te-e-e-e-e-e-e-e-e,*" with a strongly rising inflection throughout. The bird sings while sitting, the head thrown back and

Taken near Oberlin. *Photo by Lynds Jones.*

NEST AND EGGS OF CERULEAN WARBLER.

PLACED ON HORIZONTAL BRANCH AT HEIGHT OF FORTY FEET.

the breast pulsing with the earnestness of expression. It is not easy to recognize amid the May medley of song.

The nest is lashed upon a horizontal branch, or bound into a horizontal fork, well out from the tree, and always well up from the ground. Two nests which I have found in the famous South Woods were in a beech and rock maple tree respectively, one thirty, the other sixty feet from the ground. These nests resemble the nest of Redstart more than the nest of any other bird, both in composition and construction, but they were stuccoed with cobwebs outwardly. The material was mostly shreds of bark and horse-hair, with a little milkweed bark. The birds are very solicitous for their nest and young, uttering the sharp *chip* of alarm and distress, and venturing within a few feet of the intruder, but they do not show a disposition to fight. I have found nests only near small streams in the woods, or depressions where temporary streams form after severe rains or in spring.

The eggs are hardly distinguishable from other warblers' eggs. The markings incline to darker, or to less reddish in the browns. Four is the usual number for a complete set. It appears that this warbler builds too high for the Cowbird, or else the nest is too small to accommodate the sneaking creature.

LYNDS JONES.

No. 66.

CHESTNUT-SIDED WARBLER.

A. O. U. No. 659. **Dendroica pensylvanica** (Linn.).

Description.—*Adult male*: Extreme forehead ashy white; crown bright yellow (gamboge); hind neck streaked black and ashy white; back and rump bright olive-green, with partially concealed black stripes; upper tail-coverts black, edged with ashy and olive; wings and tail black, primaries and rectrices edged with ashy; secondaries and tertials edged with yellowish green; two irregular wing-bars light yellow; three outer pairs of tail-feathers extensively white on inner webs; a black patch on the side of the head including eye; an irregular white patch behind this; below white; sides of breast and sides with large chestnut patches, irregular or interrupted; bill black; feet dark. *Adult female*: Like male but duller; chestnut of sides much restricted; black face blotch divided by ashy, etc. No autumnal change in either sex. *Immature*: Quite different; above bright olive-green; below ashy or sordid white; wing-bars and tail-blotches as in adult; rectrices in unworn plumage quite acute; bill light below. Length 4.75-5.25 (120.6-133.3); av. of six Columbus speciments: wing 2.36 (59.9); tail 1.91 (48.5); bill .36 (9.1).

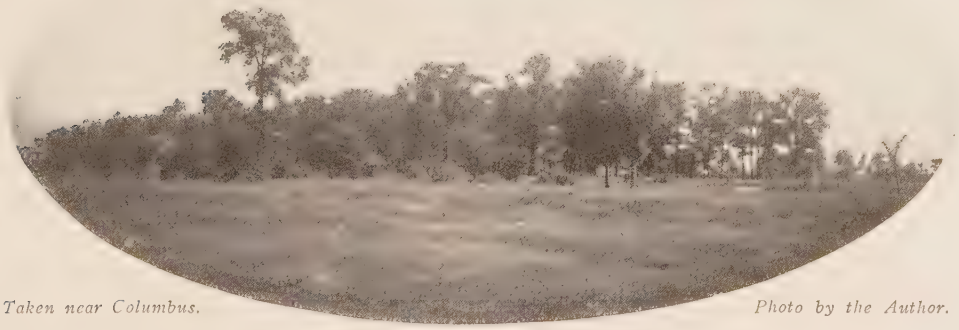
Recognition Marks.—Smaller; white under parts and chestnut sides of adult; light yellow wing-bars of young.

Nest, made of bark-strips, grasses and plant-down, and lined with hair; placed two to ten feet high in bush or sapling. *Eggs,* 4 or 5, white or creamy white, speckled with rufous or chestnut, chiefly near larger end. Av. size, .68 x .50 (17.3 x 12.7).

General Range.—Eastern United States and southern Ontario, west to Manitoba and the Plains, breeding southward to central Illinois, and northern New Jersey, and in the Appalachian highlands probably to southern Georgia. Visits the Bahamas, eastern Mexico, Central America and Panama in winter.

Range in Ohio.—Regular and common spring and fall migrant. Rare summer resident in northern portion of state.

IT is not easy for me to tell why the Chestnut-sided Warbler impresses me as an exquisite. Perhaps it is on account of his small size and close-knit form, or his willingness to have me approach within speaking distance. His colors are not so bright, nor their pattern in either the contrast or harmony



Taken near Columbus. *Photo by the Author.*

AN OFT FREQUENTED GROVE.

that may be found with other warblers, but there seems to be something about the bird which makes the day brighter, the wearing field-work easier, and the hours of fasting forgotten when he flits into view. I have sometimes half suspected that he was conscious of my admiration from the manner in which he displayed his pretty color and trim form. The slightly opened wings, spread tail, and quick movements give a pleasing appearance. The females and fall birds lack the distinct contrasts of color found in the spring males, but they usually have some trace of the chestnut on the sides.

In village and city parks this little warbler may be found well up among the tree-tops, gleaning from the new leaves the insect eggs and larvæ, but in the woods he prefers a lower range. I have found him among the

spice bushes and lower branches, but not on the ground. He seems rather partial to damp woods, possibly because insects are more abundant there.

Feeding and singing are sandwiched together for the better part of the day, as though some expression of gratitude were necessary after each morsel was received. It is often a less spirited song than many warblers give, seeming to be a sort of soliloquy upon life and its compensations, but it is none the less pleasing. There is a pretty close resemblance to some phrases of the song of Yellow Warbler, but a little attention and discrimination will bring out the differences in quality as well as quantity. The song is more often heard on the Oberlin College campus than in the woods about Oberlin, and there it is somewhat different than the woods song. *"Wee-chee, wee-chee, wee-chee-e-e-e,"* with the accent on the first syllable of each phrase, is the campus song. In the woods he sings this way: *"Te te te te wee chu,"* and occasionally, *"To wée, to wée, tée e-e-e."* In the woods the song seems to be more spirited than on the campus. The difference may possibly be due to the fact that the first migrants are those which visit the campus, while the later ones remain in the woods.

In the vicinity of Oberlin Chestnut-side arrives about the fifth of May and the last travelers leave for the north shore of lake Erie during the last week of May. It is possible that some stay with us all summer, but if so we have not found them.

The nest resembles the nest of Yellow Warbler, both in situation and composition. It is usually placed in the fork of a bush or shrub from two to eight or nine feet from the ground. I suspect that the nest is more often built in the woods than one would expect with Yellow Warbler. It is well made, suiting the daintiness of the bird.

During August and the most of September one may find this warbler in the shrubbery and second growth in the plainer autumn plumage. He is not singing then during the heat of the day, but may be recognized by the trim form and small size. LYNDS JONES.

No. 67.

BAY-BREASTED WARBLER.

A. O. U. No. 660. **Dendroica castanea** (Wils.).

Description.—*Adult male*: Forehead, extreme chin, and sides of head broadly (including eye) black; crown and nape deep chestnut; sides of neck and narrow cervical band rich creamy buff; remaining upper parts olive-ashy, streaked with black; wings and tail dusky; two cream-white bars on wings, separated by considerable dusky space; three outer pairs of tail-feathers with large

BAY-BREASTED WARBLER
Dendroica castanea
Life-size

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subterminal blotches of white on inner webs; throat and sides of breast chestnut, produced irregularly on sides; middle of breast and remaining under parts buffy. *Adult female*: Similar to male but duller; black of head overlaid with olive-ashy; chestnut of under parts very faint. *Immature*: Bright olive-green above, streaked with black; below whitish, tinged with buffy or yellow on breast, and with buffy (female) or rusty on flanks. Length 5.00-6.00 (127.-152.4); av. of four Columbus specimens: wing 2.45 (62.2); tail 2.12 (53.9); bill .40 (10.2).

Recognition Marks.—One of the largest of the genus; chestnut throat-patch distinctive in adult. For young see under following species.

Nesting.—Not known to breed in Ohio. *Nest,* described as a compact, cup-shaped structure of grass, bark-strips, twigs, etc., lined with plant-down and hair, and placed five to twenty feet high in coniferous trees. *Eggs,* 4 or 5, white with a greenish or bluish tinge, speckled in usual warbler fashion, chiefly near larger end, with reddish- or olive-brown. Av. size, .71 x .51 (18. x 13.).

General Range.—Eastern North America north to Hudson Bay. Breeds from northern New England and northern Michigan northward; in winter south through eastern Mexico (rare) and Guatemala to Colombia.

Range in Ohio.—Not common, but fairly regular spring and fall migrant.

ONCE in a while we almost miss this gentle Warbler during the spring migrations. This is not so much because the bird is really rare as because it comes late in the season, say about the 10th or 15th of May, when the foliage is well out, and stays for the most part well up in the trees. It is moreover a rather quiet bird, having nothing of the nervousness and dash peculiar to those who have braved the later frosts. So far as ready identification goes the bird is further unfortunate in that its somewhat rare song bears a close resemblance to that of the swarming Black-polls who are soon to bring up the rear of the great procession. But in spite of these obstacles, or because of them, the "one good view" which satisfies the working ornithologist each season is eagerly sought after. It is particularly disappointing that a bird of such substantial quality, and of such elegant appearance withal, should not deign to tarry with us through the summer; but this is in part atoned for by the swarms of lusty children which sweep down upon us in the fall from the teeming North. Then there is the perennial problem of identification in immature plumage. How dull a study ornithology would be without some of these bracing posers!

The song of the Bay-breast does not seem to have been particularly well studied. It is perhaps the highest and squeakiest of them all. Sometimes it is merely a high hissing *tswis, tswis, tswis,* but oftener a succession of shrill sibilations in the form of a swell, *wiss wiss wiss wiss wiss wiss wiss.*

No. 68.

BLACK-POLL WARBLER.

A. O. U. No. 661. **Dendroica striata** (Forst.).

Description.—*Adult male*: Top of head uniform lustrous black; cheeks, hind neck, and cervical collar white, minutely streaked with black; remaining upper parts olive-gray streaked with black; wings and tail dusky with narrow olive-gray edging on exposed webs; two loose white wing-bars formed by tips of coverts; two outer pairs of tail-feathers with subterminal white blotches; traces of white on remaining pairs, except central; under parts white, extensively streaked with black on sides, the streaks usually confluent on sides of throat; bill dark above, light below; feet pale. *Adult female*: Above, including crown, grayish olive-green; everywhere streaked with black; below whitish, tinged with greenish yellow on breast and sides, and with dusky lateral streaks. *Adult male in autumn and winter*: Very different from the summer plumage. Above dull olive-green, passing gradually into dull gray on upper tail-coverts; back and scapulars narrowly streaked with black; white wing bands usually tinged with yellow; a narrow and indistinct superciliary streak of pale olive yellowish; auricular region and sides of neck like upper parts; under parts pale olive-yellow or straw-yellow, whitening posteriorly; sides and flanks indistinctly streaked with dusky; *under tail-coverts white* (Ridgway). *Immature*: Similar to adult female but brighter; less streaked on the back and scarcely, or not at all, below. Length about 5.50 (139.7); av. of six Columbus specimens: wing 2.95 (74.9); tail 1.96 (49.8); bill .39 (9.9).

Recognition Marks.—One of the larger species. Black "poll," white under parts, and lateral black streaks of male; grayish olive-green and robust size of female and young. "This species in winter plumage closely resembles immature specimens of *D. castanea,* but may be at once distinguished by the pure white, instead of buff, under tail-coverts, and pale yellowish brown, instead of dusky, feet, independent of other differences" (Ridgway). Young Black-polls are scarcely distinguishable from the young of *D. castanea.* Above they are precisely like the Bay-breasts, but below they are somewhat less strongly shaded with yellowish or buffy.

Nesting.—Does not breed in Ohio. "*Nest,* of twigs, moss, rootlets, etc., lined with fine grasses and tendrils, generally in spruce trees, about six feet up. *Eggs,* 4-5, white, more or less speckled and spotted, and generally heavily blotched at the larger end with cinnamon-, olive-, or rufous-brown" (Chapman). Av. size, .70 x .54 (17.8 x 13.7).

General Range.—Eastern North America west to the Rocky Mountains, north to Greenland, the Barren Grounds, and Alaska, breeding from northern New England and the Catskills northward. South in winter to northern South America, but not recorded from Mexico or Central America.

Range in Ohio.—Abundant spring and fall migrants,—the latest comers in spring, among the first to return in late summer.

BLACK-POLLS bring up the rear of the great Warbler host. And when one has seen them the reason of their tardiness becomes apparent.

Whereas most Warblers are restless, impatient, fussy, Black-polls are deliberate, decorous, self-contained. They are in no hurry; they have no trains to catch or previously appointed trysts to keep. There is added reason, too, for their leisurely passage, in that their summer camps are pitched far north where spring is tardy also.

In spring the birds seldom arrive before the 15th of May and oftener it is nearer the 20th. The males greatly exceed the females in number, so that one really wonders when the females pass. It is possible that they do not light largely until Lake Erie is traversed, since the species is reckoned rare in the southern part of the state, and only tolerably common in the vicinity of Columbus. For all the birds appear so slow the northern movement is rather rapid, and only an occasional straggler is found after the 25th of May.

It is always with a feeling of sadness that the bird-man views the arrival of these birds which mark practically the close of Warbler season. It has been too short, that period of bursting buds and twinkling wings; but now the leaves are all unfolded, the fairy visitants have stolen away one by one—and here comes Black-poll. To be sure his presence befits the season; the bustle of awakening life over, his monotonous droning chimes in accurately with the murmur of bees' wings, and lies softly upon the pulsing tribute of heated air by which the sounds are alike borne heavenward; but somehow we still rebel—youth was all too short!

The Warblers are lost to view now if they remain in the tree-tops, but a foggy morning, or some reason less apparent, will sometimes bring them down to feed in the shrubbery. At such times they are quite approachable and one may see how—or at least *when*—they produce that fairy creaking which they call a song. This consists of a series of exactly similar notes uttered rapidly, but in a beautiful musical swell. Many syllables will satisfy the ear, but Mr. Langille has perhaps hit it off the best when he says, "*tree, tree, tree, tree, tree, tree, tree, tree.*"

The Black-polls swarm through our state during the fall migrations when they may be observed from the last week in August well into October. It is not probable, however, that any given individual passes so long a time with us, but only that the species occupies such a diverse breeding range that the impelling causes of evacuation are correspondingly diverse in form, and asynchronous in action.

No. 69.

BLACKBURNIAN WARBLER.

A. O. U. No. 662. **Dendroica blackburniæ** (Gmel.).

Synonyms.—PROMETHEAN WARBLER; PROMETHEUS.

Description.—*Adult male*: Chin, throat, and fore-breast flaming orange (Cadmium yellow); on the rest of head and neck paler cadmium, showing through the black in spots, viz. a small patch on crown, a narrow median line on forehead, a superciliary line broadening on lores and behind, an infra-orbital spot, and a patch on side of neck; remaining upper parts black variegated with white or creamy white; wings and tail dusky; large white wing-patches formed by tips of middle, and outer webs and tips of greater coverts, but indented by dusky webs of outermost feathers; white blotches on inner webs of tail-feathers, extensive on two outer pairs, narrow on remainder except central pair; remaining under parts sordid white or yellowish, with black streaks on sides of breast and sides. *Adult female*: Similar to male but paler; dull olive-gray streaked with dusky on back; throat Indian yellow; remaining yellow faded to maize color. *Immature*: Like female but browner; narrow white wing-bars and dusky-striped interscapular region diagnostic; yellow paler, almost wanting on breast. Length about 5.25 (133.3); av. of four Columbus specimens: wing 2.60 (66.); tail 1.71 (43.4); bill .38 (9.7).

Recognition Marks.—Medium size; orange-yellow of throat is distinctive even when faded.

Nesting.—Not known to breed in Ohio. *Nest,* a compact mass of bark-strips, spruce-twigs, grasses and plant-down, lined with hair, fur, or feathers; placed well up in coniferous trees. *Eggs,* 4, greenish- or bluish-white, speckled and spotted in usual warbler fashion. Av. size, .69 x .49 (17.5 x 12.5).

General Range.—Eastern North America west to eastern Kansas and Manitoba, breeding from the southern Alleghanies, Massachusetts and Michigan north to Labrador. In winter south to the Bahamas, eastern Mexico, Central America and western South America.

Range in Ohio.—Abundant spring and fall migrant.

IT is not difficult to follow the injunction of the birds: Love me, love my woods. One simply cannot help it if they are as charming, and varied, and productive as is the group of adjoining tracts near Oberlin, known collectively as the South Woods, and now called affectionately by the nature-lovers the "Old" South Woods. Nor is the reverent adjective misplaced, for the three kingly oaks which mark the bend of Warbler corner (appearing on page 155 and again on page 156) are full four hundred years old, as measured by the rings of a brother hard by, recently slain in the full vigor of sap. No guns are allowed in the forest;—would that as much could be said of axes! Berrying is forbidden upon pain of expulsion, and save for a few wandering

botanists (simple, harmless folk who occasionally rise to an appreciation of birds, and are therefore to be encouraged) there is none to molest the bird-man nor to disturb his treasures. Dense shade, open clearing, crowded saplings, scattering bush-clumps, dry land and swampy—all are to be found within the limits of that precious hundred acres, and all make separate contribution of interest to the eyes and ears of the ornithologist. It would seem that the force of some venerable tradition impels each avian wanderer, each rarer bird of passage, to pause and rest, or worship, in this ancient shrine. To speak of warblers alone, it was here that we first saw Golden - winged, Brewster, Hooded, and a score of lesser lights. Here Strong saw the Connecticut, and Jones the Prairie and Kirtland. Here only last season a Kentucky turned up a hundred miles beyond his customary range. In short all but five of the forty species of Warblers credited to Ohio have reported in these allied bits of woodland.

Taken near Oberlin. *Photo by the Author.*
"THREE KINGLY OAKS."

But of all the spots in this avian paradise the choicest is "Warbler corner," and of all the birds which crowd to the edge of the wood to mark

the rising sun the brightest is Prometheus, the torch-bearer. Like a beacon light his glowing breast sends a quick answering flash to the first greeting of the eastern majesty, and drunk with joy, the tiny spark moves off to set the woods on fire. When his back is turned you lose him in the upper green, but once around and flash! flash! come swift messages of beauty from this divinely fashioned heliograph.

It is enough! You know him now. For the rest the Blackburnian Warbler hops about, and flits, and snatches bugs like other birds. Like

Taken near Oberlin. *Photo by the Author.*

THE OLD SOUTH WOODS—WARBLER CORNER.

many others he too, alas! passes far north to breed, quenching his flame for the season in the bosom of some gloomy hemlock. During the spring migrations the brightest males are among the middle early comers, but the paler females, and the youths with breasts unfired, abound from the middle to the twentieth of May, and linger in rare instances until the end of that month. The fall movement begins about the twentieth of August and lasts through September. The summer nesting of this species is unusually successful, to judge from the augmented numbers which appear during the fall migrations.

The song of the Blackburnian Warbler is of the squeaky order and the notes, altho penetrating enough and undertaken with considerable energy, lack volume and fade out to a fairy whisper before the song is done. *"Ssu-witts, ssu-witts, ssu-witts, ssu-witts, ssu-witts, ssu-witts, ssu-witts, ssu-witts,"* is one attempt to express this duodecimo songster.

No. 70.

SYCAMORE WARBLER.

A. O. U. No. 663a. **Dendroica dominica albilora** Ridgw.

Synonyms.—WHITE-BROWED WARBLER; WHITE-BROWED YELLOW-THROATED WARBLER.

Description.—*Adults*: Above bluish-gray; on forehead interspersed with black; a short median frontal line, a superciliary stripe reaching to nostril, and the lower eyelid, white; throat bright yellow, bordered on side by extensive black cheek-patch, which includes lores and is produced behind on lower neck; behind this on neck a white area continuous with superciliary stripe; remaining under parts white, heavily streaked with black on sides; black streaks gathered on each side into a loose chain connecting with black of cheeks; wings and tail dusky, with bluish or ashy edgings, the former with two broad white bars formed in the usual fashion; subterminal white blotches on two outer pairs of rectrices; bill and feet dark. *Immature*: Similar to adult, but much tinged with brown above and below; black of head subdued, and yellow of throat paler. Length 4.50-5.50 (114.3-139.7); av. of six Columbus specimens: wing 2.47 (62.7); tail 1.83 (46.5); bill .44 (11.2).

Recognition Marks.—Medium size; lemon-yellow throat bordered by black on sides, and abruptly by white below; *white* superciliary line.

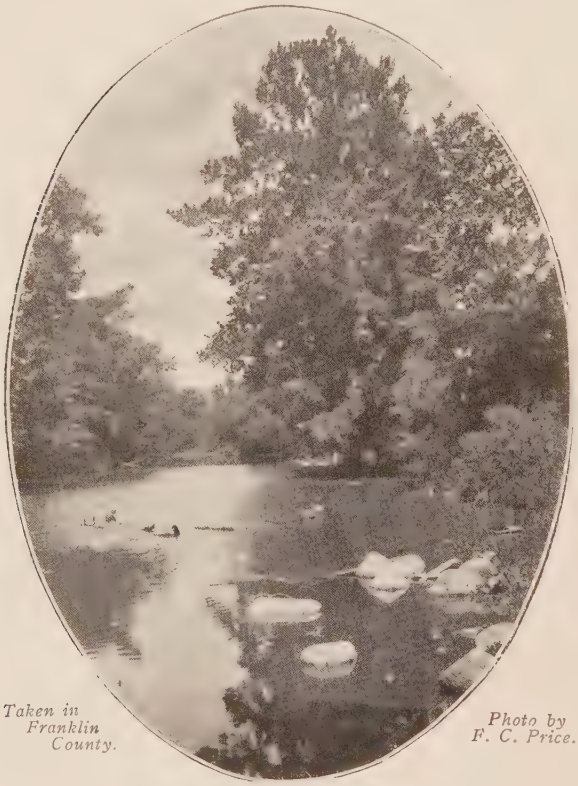
Nest, usually placed at a considerable height in sycamore or other trees, near water; of weed-stalks, twigs, and grasses, lined with plant-down, etc. *Eggs,* 4 or 5, white or grayish white, speckled and spotted distinctly or obscurely with reddish- or olive-brown, sometimes gathered in wreath about larger end. Av. size, .69 x .53 (17.5 x 13.5).

General Range.—Mississippi and Ohio Valleys west to the Plains, north to Lake Erie and southern Michigan, east to western North Carolina; in winter south to southern Mexico and Central America.

Range in Ohio.—Formerly abundant, now less common; along wooded streams, principally in southern, south-central, and western portions, but locally wherever sycamore trees abound. Breeds.

IN view of the recent changes in the status of this species, it is well to recall Dr. Wheaton's words penned in Columbus some twenty-five years ago: "Not rare summer resident; common during the spring migration.

This is the first of the family to arrive in spring. It is always to be seen before the Yellow-rumped and Yellow Warblers make their appearance, sometimes before the last snow and ice. I have seen them in considerable numbers on the 13th of April, and have known of its occurrence as early as April 9th. When on their migrations they confine themselves almost exclusively to the trees which skirt the streams, and move northward by day with considerable rapidity. During the whole day their characteristic song, *tswee-a, tswee-a, tswee-a, tswee, tswee, tswee, tu-wee,* may be heard, sometimes at a distance of a quarter of a mile, as the birds feed in the sycamore and elm trees. * * * They are seldom seen in woodland, though they not infrequently visit the shade trees and gardens of the city. They are much more abundant during the spring migrations than at any other time. In this locality it is not uncommon to see a dozen in a morning's walk, about one-third of which may be captured."



Taken in Franklin County. *Photo by F. C. Price.*

AN IDEAL SPOT FOR SYCAMORE WARBLERS.

In marked contrast with the preceding is the fact that there are no records of the bird's appearance in the recent annals of the Wheaton Club of this city. I have met with only one specimen in the state, a singing male, in a secluded hollow near Cincinnati, where it is still regarded as not uncommon The bird was seen on April 25th, 1903, before the foliage was fully out, and during the three hours it was under examination it divided its time about evenly between a single ash tree on the brink of the glen and the central sycamores shown in the illustration. The bird seemed to be gleaning insects from the swelling buds of the ash, but he paused frequently to throw his head up and sing. The song was rather deliberate, high-pitched, emphatic, of a singularly penetrating quality, and unvaried in character, *tswee, tswee, tswee, tswee,* the last note

with a piercing quality like that of the Yellow Warbler. Rev. W. F. Henninger, 1902, gives the bird as a "rare transient * * * observed in Scioto County only;" while Raymond W. Smith (1891) reported it as a common migrant in April in Warren County.

It is more than probable that the decrease in numbers in the case of this species is due solely to the continued destruction of the sycamore trees. Here, at least, is a bird rightly named, for the Warbler has cultivated this grim and grizzled old man-of-the-rivers—whom all the other birds, save perhaps the Blue-gray Gnatcatcher and the King-bird, seem to shun—until its dependence upon it is almost absolute. That the bird was formerly not uncommon northerly is abundantly attested, and it may be that it can still be found in favored spots. Mr. Jerome Trombley knew it as a rare summer resident along the River Raisin, in Monroe County, Mich., and in 1880 succeeded in locating a nest. It was placed 60 or 70 feet high in a sycamore tree and at the end of a branch, some 20 feet from the trunk. Inasmuch as the tree was seven feet through at the base and the supporting limb did not promise to support above a fifty pound weight, the discoverer deemed the treasure unattainable. In 1897 the same observer noted only one bird. Unless definite steps are

Taken near Cincinnati. *Photo by the Author.*

STILL-HOUSE HOLLOW.

taken to reserve large areas of the picturesque sycamores, the present generation must witness the passing of the Sycamore Warbler from its northern haunts.

No. 71.

BLACK-THROATED GREEN WARBLER.

A. O. U. No. 667. **Dendroica virens** (Gmel.).

Description.—*Adult male*: Throat and breast above and on sides glossy black; sides of head and neck bright yellow; a line through eye, expanding behind, olive-green; above bright olive-green, clearing to yellow in front and on sides of crown; spotted or streaked with black on middle back, and sometimes, minutely, on crown; upper tail-coverts ashy- or olivaceous-edged; wings and tail dusky with ashy edgings on external webs; two broad white wing-bars; outer pair of tail-feathers almost entirely, and succeeding pairs decreasingly white on inner webs; middle of breast, belly, and crissum pale yellowish white; bill black; feet dark brown. *Adult female*: Similar, but with less black streaking on back, and with black of throat and sides extensively veiled by yellowish skirtings of feathers. *Immature*: Like female, but with more yellow below, and with black of throat still more thoroughly concealed by yellow tips. Length 4.50-5.40 (114.3-137.2); av. of ten Columbus specimens: wing 2.49 (63.2); tail 1.91 (48.5); bill .38 (9.7).

Recognition Marks.—Medium size; bright yellow of cheeks and forehead contrasting, or not, with black of throat.

Nest, of twigs, bark-strips, grass, moss, and feathers, placed ten to fifty feet high in coniferous trees. *Eggs,* 4, white with creamy or buffy tints, speckled and spotted with lilac-gray and rufous-brown, usually gathered in loose wreath about larger end. Av. size, .63 x .49 (16. x 12.5).

General Range.—Eastern North America to the Plains, north to Hudson Bay Territory, breeding from Connecticut and northern Illinois northward, and south along the Alleghanies to South Carolina. In winter south to Cuba and Panama. Accidental in Greenland and Europe.

Range in Ohio.—Very common spring and fall migrant. A few pairs remain to breed in the rare patches of coniferous timber in the northern portion of the state.

IF we are sometimes disposed to envy the ornithological pioneers, Wilson, Audubon, and the rest, because of their unique opportunities for observing birds now rare or extinct, we may comfortably reflect upon the fact that that most fascinating and distinctively American family, the *Mniotiltidae,* is yearly marshalled before our eyes in a way that was denied the fathers.

BLACK-THROATED GREEN WARBLER
Dendroica virens
Life-size

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The chief reason for this is one which we deplore otherwise, viz., the continued denudation of the forests. It is probably safe to say that in Wilson's day, that is during the opening decade of the last century, eighty-five per cent of the area of our state was covered with timber. In such a forest even of the great Warbler army, whole regiments might pass year by year unnoticed, and many species be held rare which were really abundant. But as early as 1885 the forest acreage was estimated at only seventeen per cent of the whole. These are the latest statistics available, but the percentage, without doubt, has steadily decreased since then. In this respect, then, we are favored; for if the birds would forage at all, they must needs avail themselves of our restricted wood-lots and swarm through our fenced orchards. We are unmasking hidden beauties, and compelling reluctant fays to show themselves.

The Black-throated Green Warbler, as an individual, is little troubled over our ingenious compulsion, for it is not at all unwilling to show itself, and has never learned a wholesome fear of man's presence. It is one of the commonest warblers both in spring and fall, and seems in no hurry to get on, but there is no recent evidence that it ever fails to make the passage of Lake Erie. Confined for the most part to the tops of trees, it not infrequently ventures down to inspect you, hopping daintily from branch to branch, and leaning forward to peer at you inquiringly as the distance decreases.

The song is an odd little affair of lisping squeaky notes, but as innocent as the upturned face of a questioning child. Its delicacy defies vocalization, but Mr. Burroughs has proposed a graphic representation which is quite unforgetable, "——— ———-√———".

Family groups of six or seven individuals may be seen early in the fall hunting close together, but as the season advances the weakening bonds of kinship are lost in the sense of clanship, and this in turn is blended with the sense of racial consanguinity, which more or less affects all warblers. Rev. W. F. Henninger reports a remarkable occurrence which took place near South Webster in Scioto County. He says, in substance: On September 28, 1899, I ran into a company of Warblers which I would place conservatively at two thousand individuals. It was like a regular army as it moved up a long sloping hillside, and with wonderful rapidity. The wind was blowing almost a gale from the north, and the birds allowed themselves to be urged before it in the direction of their ultimate retreat, like half-stubborn autumn leaves. Lisping, chipping, whirling, driving, they hurried on and I after at full speed, panting, and wishing devoutly for a better chance to identify the fleeing forms. Arrived at the top of the hill the army suddenly halted and when I arrived breathless I had time to note the arrangement by species, not rigid indeed, but sufficiently striking to command attention. In the center were seen Hooded Warblers and a sprinkling of Chestnut-sides. On either

side of these in turn were Black-throated Greens and Sycamores, about two hundred of each; while the wings proper were held by Bay-breasts and Black-polls in enormous numbers. The order, as I say, was not strictly maintained but the specific grouping within the general ranks was at least remarkable. As the birds deployed to feed the specific lines were not quite obliterated.

No. 72.

KIRTLAND WARBLER.

A. O. U. No. 670. **Dendroica kirtlandi** (Baird).

Description.—*Adult male in spring*: Above slaty blue, streaked finely on crown and broadly on back with black, the back with a brownish gray cast; lores and frontlet black; a white spot on either eyelid; sides of head and neck slaty blue; wings and tail black, edged with gray; the middle and greater coverts whitish-edged, but not forming distinct bars; outer tail-feathers white-blotched on inner web; under parts clear light yellow, whitening on crissum and chin, the breast with a few small spots, and the sides with short streaks of black. *Adult female*: Similar but duller above and paler below; lores grayish; sides washed with brownish. *Adult male in autumn*: Under parts rich yellow, continuous,—no spotting on breast but sides heavily streaked with black; upper parts, except wing and tail, olivaceous, lightening anteriorly; head without conspicuous markings, but with dull yellowish superciliary stripes and cheeks. *Immature*: Like adult female, but browner gray above; more brownish on sides; breast more distinctly (?) spotted. Length 5.50-6.00 (139.7-152.4); wing 2.75 (69.9); tail 2.35 (59.7); bill .47 (11.9).

Recognition Marks.—Larger; slaty blue back with black stripes; clear yellow below with scattering streaks on side (only comparable in this respect to the Prairie Warbler, which is much smaller and an entirely different bird).

Nesting not known to science.

General Range.—Central northern United States during spring migrations; Atlantic Coast, Virginia, and South Carolina during spring(?) and fall migrations; breeding haunts unknown,—probably Hudson Bay Territory and north of Great Lakes. Winters in the Bahamas.

Range in Ohio.—Nine of the twenty or more specimens recorded in the United States were taken in this state. One fall record, Lawrence County, August 28, 1902.

THE Kirtland Warbler has for many years been the *rara avis* of American ornithology. There are other species of which fewer specimens exist in museums, and others still which are now verging upon extinction,—to say nothing of those strange enigmas, the "Carbonated," "Blue Mountain," and "Small-headed" Warblers, known from the works of Audubon and Wilson and now lost to science, if ever they did in fact exist as independent species.

But in the case of the Kirtland Warbler the lapse of time has brought increased knowledge, and the ornithological appetite has been more keenly whetted by each succeeding announcement of the bird's occurrence.

The type specimen, an adult male, was collected by Mr. Charles Pease, May 13, 1851, near Cleveland, and by him presented to Dr. Jared P. Kirtland. Dr. Kirtland forwarded the bird in the flesh to Professor Baird for identification, and it was very properly named by the latter Kirtland's Warbler, in recognition of the fact that to Dr. Kirtland we are "indebted for a knowledge of the Natural History of the Mississippi Valley." Five other specimens have since been secured in the vicinity of Cleveland, the last by H. E. Chubb on May 12, 1880. In may, 1872, Mr. Charles Dury shot a male bird near Cincinnati; and the last Ohio specimen reported was taken by Lynds Jones at Oberlin, May 9, 1900.

At this writing (July 1, 1903) some twenty-five specimens have been captured in the United States and Canada, while more than fifty have been taken in the winter haunts of the species in the Bahama Islands. Of the United States specimens the westernmost was obtained by H. M. Guilford at Minneapolis, Minn., and the northernmost was picked up dead below the light house on Spectacle Reef, in the Straits of Mackinac, Michigan.[1] All specimens seen in the interior (until the summer of 1902) have been spring birds, but two fall specimens were shot on the coasts of Virginia and South Carolina respectively. After Cleveland, Ann Arbor, Michigan, has been a leading place for the capture of this rare warbler, and it seems probable that that locality is especially favored during the northern migrations. The species will doubtless be found breeding in northern Minnesota, Wisconsin, Michigan, Ontario, and in the region south of Hudson Bay.

The pursuit of this woodland beauty, whose only offense is rarity, has been so keen that most observers have shot first and questioned afterward. Authorities agree, however, that it is a rather quiet, sedate bird, having no especial fear of man, but frequenting the lower levels of bushes and trees, and allowing a somewhat near approach for inspection. It has been compared by some to the Palm Warbler, and it certainly resembles this bird in its habit of bobbing, or jetting the tail.

Rev. Leander S. Keyser closely observed a specimen near Springfield, Ohio, and heard its song. He gives it as "a blithe, liquid melody" and says "the tones were full, clear and bubbling."[2] On May 7th, and 9th, 1900, Professor Lynds Jones heard two, and perhaps three, of these Warblers near Oberlin. "The song was loud and clear, given with all the vigor of a Wren or Kinglet; the body being straightened to almost a perpendicular direction, and the beak pointing straight up. It was no by-talk or incidental song, but manifestly an earnest purposeful call song. The song is a doubly phrased one, the first part slightly longer and a little less rapidly uttered, the second

1 For many of these details I am indebted to Mr. Frank M. Chapman's resume in The Auk, October, 1903.
2 "Bird-dom," by Leander S. Keyser, p. 63.

part quickly and more vigorously uttered. I have written it thus: *ter ter tertee; tswee te chu.*"[1]

On the 28th of August, 1903, Professor Jones and the writer encountered two of these birds in the extreme southern part of Lawrence County, at a point opposite Ashland, Kentucky. The first bird seen loitered for as much as ten minutes in the top of a little willow tree, and appeared in nowise disturbed by our scrutiny. He was deliberate, not to say indolent, in movement, and delivered from time to time a very light and pleasing rollick, with something of the quality but nothing of the strength of the Myrtle's song. After being observed for about twenty minutes the bird darted down into a thicket where he was joined by another precisely similar, and after a minute or two the pair retired into the depths. So far as reported this was the first appearance of the Kirtland Warbler in the interior during the fall migration.

As this book is going to press word comes from Michigan that Mr. Norman A. Wood of Ann Arbor has just discovered the nesting haunts of the Kirtland Warbler in Oscoda County. According to the last issue of the Bulletin of the Michigan Ornithological Club, Vol. IV., No. 2, June, 1903 (really issued about July 10th), "Just after this issue has gone to press Mr. Wood returned home from his trip north in quest of the Kirtland's Warbler with very gratifying success, having obtained a fine series of skins, male, female, nestlings, full-fledged young, nest, and eggs." Bravo! and alas! The last shrine of ornithological mystery has been penetrated. There are no more worlds to conquer.

No. 73.

PINE WARBLER.

A. O. U. No. 671. **Dendroica vigorsii** (Aud.).

Synonym.—PINE-CREEPING WARBLER.

Description.—*Adult males*: Above and on sides of head and neck bright olive-green; wings and tail dusky, edged with brownish gray or whitish; two broad whitish or grayish white wing bars; two outer pairs of rectrices extensively white on inner webs; streak over lores, eyelids, chin, throat, and breast well down, bright greenish yellow; streaked indistinctly on sides of breast and sides with olive; belly and crissum dull white; buffy wash on flanks; bill and feet dark brown. *Adult female*: Above olive-gray, or vinaceous gray with an olive tinge; wing-bars narrower and more decidedly gray than in male; below dingy or grayish with pale yellow or yellowish tinge on breast; traces of olive striping on sides. *In winter* both sexes are browner above; the male brighter yellow and

1 The Wilson Bulletin, No. 32, July, 1900.

the female buffier below. *Immature*: Dull brownish above; below brownish gray or dingy. Length 5.00-5.60 (127.-142.2); wing 2.80 (71.1); tail 2.18 (55.4); bill .44 (11.2).

Taken near Sugar Grove. *Photo by the Author.*

A PINE BARREN.

PINE WARBLERS MAY BREED HERE.

Recognition Marks.—Medium size; gamboge-yellow with olive shading below, and grayish wing-bars; singularly devoid of positive characters. Usually keeps to coniferous trees and is a creeper in habits.

Nesting.—Breeding not yet reported for Ohio. *Nest*, placed high in pine or cedar trees; composed of bark-strips, leaves, fine grasses, etc., lined with plant-down, hair and feathers. *Eggs*, 4 or 5. "The ground color is a bluish white. Scattered over this are subdued tintings of fine delicate shades of purple, and upon this are distributed dots and blotches of a dark purplish brown, mingled with a few lines almost black" (Brewer). Av. size, .70 x .52 (17.8 x 13.2).

General Range.—Eastern United States west to the Plains, north to Manitoba, Ontario, and New Brunswick, wintering in the South Atlantic and Gulf States, and the Bahamas.

Range in Ohio.—Rare or casual during migrations. Probably more common in eastern portion. Thought to breed in the southern part and should be found nesting anywhere in the state in evergreen timber.

OHIO must seem like a desert to this pine-loving bird, but he is found once in a while either in some tiny oasis like that shown in the cut (which *we* should call a pine "barren") or else among the orchard and shade trees of a chance resting place. The bird is not certainly known to breed in the state, but Rev. W. F. Henninger, then of Waverly, Ohio, took a young male August 5th, 1898, under circumstances which made it appear probable that the bird had been reared in the immediate vicinity.

The Pine Warbler has some of the near-sighted ways of the Brown Creeper, and like that most prosaic mortal gleans a living from the trunks and larger limbs of trees. In crossing from tree to tree it has a pretty, undulating flight. In winter in the southern pineries, where it abounds, it is occasionally found associated in loose flocks which feed upon the ground.

"Its song," says Chapman, "is a clear sweet trill. Southern birds, in my experience, have more musical voices, and their notes suggest those of the Field Sparrow, while the song of northern birds has more the quality of the Chipping Sparrow's."

No. 74.

PALM WARBLER.

A. O. U. No. 672. **Dendroica palmarum** (Gmel.).

Synonyms.—RED-POLL WARBLER; YELLOW RED-POLL WARBLER (name now restricted to subspecies *D. p. hypochrysea*); WAGTAIL WARBLER.

Description.—*Adults*: Crown chestnut; superciliary line yellow; extreme forehead dusky, divided by short yellow line; lores dusky; cheeks grayish, tinged or streaked with chestnut; upper tail-coverts yellow; remaining upper parts grayish brown, slightly tinged with olive; wings and tail dusky, with obscure grayish or greenish yellow edgings, the former without bars; subterminal white spots, usual to the genus, on two outer pairs of rectrices; chin, throat and crissum clear yellow; remaining under parts yellowish or dingy, more or less streaked, especially on sides, with dusky or pale rufous; a loose necklace of small dusky spots. *Adult in winter and immature*: Crown-patch much obscured by brownish; superciliary line whitish or buffy; below, dingy white or buffy with faint yellowish tinge; breast and sides obscurely streaked with dusky, and sides washed with brownish; crissum clear yellow; upper tail-coverts yellowish olive-brown. Length 4.50-5.50 (114.3-139.7); av. of four Columbus specimens: wing 2.60 (66.); tail 1.98 (50.3); bill .40 (10.2).

Recognition Marks.—Medium size; chestnut crown distinctive in high plumage; yellow crissum in any plumage. Keeps to fence-rows, hedges and wayside bushes; "bobs" nervously and wags tail.

Nesting.—Does not breed in Ohio. *Nest,* on the ground in tuft of grass, compactly built of grasses, bark and moss. *Eggs,* 4, creamy white, spotted and blotched with purple, lilac and reddish brown. Av. size, .70 x .52 (17.8 x 13.2) (Davie).

General Range.—Northern interior to Great Slave Lake; in winter South Atlantic and Gulf States, the West Indies and Mexico. Of rare but regular occurence in the Atlantic States in migrations.

Range in Ohio.—Regular and common spring and fall migrant. Has been taken in winter near Cincinnati.

IN the careful husbandry of nature this bird alone of the Wood-Warbler kind has been assigned to a station unmistakably humble. The Prairie Warbler, indeed, regularly frequents low bushes, but only the "Red-poll" takes freely to the ground as well. It was there that he learned from the Water Thrushes that quaint habit of tilting the body and shaking or "jetting" the tail, as tho protective harmony of coloration must be atoned for by some conspicuous and incessant motion, lest the bird be stepped on unawares. Altho it feeds much upon the ground, especially in its winter home in the southern states, where its hops about after the fashion of a Titlark or even patters along the dusty roadside, its favorite resorts during migrations are wayside coppices, neglected fence-rows, and the undergrowth of damp woods. In such places it is to be found in April, flitting from bush

to bush or searching quietly among the weeds. It usually lingers well into May and appears again, but less frequently, rather late in the fall. The bird is somewhat variable in appearance and often quite puzzling at some distance. Now a casual glance notes it for a sparrow, and again it challenges attention as some mysterious unknown. If only one catches the nervous flirt of the tail the case is out of Chancery.

Several writers on birds pour contempt on the Palm Warbler's song and many profess ignorance of it altogether. It is not a very elaborate affair but I have heard it delivered with a sprightliness and energy which called me half way across a pasture. One bird in particular lured me to the edge of a wood lot with a spirited rollicking chatter which made me suspect Junco in an ecstacy. Its ordinary song consists of a succession of twinned notes in a swell. On this point Lynds Jones says, "Each syllable should be given a half double utterance except at the middle of the swell, where the greater effort seems to coalesce the half double quality into one distinct syllable." At other times I have noticed a mere sustained sibilation, *wissa, wissa, wissa, wissa, wissa,* without inflectional change. Besides this he has the inevitable Dendroican *chip,* but it is scarcely distinctive enough to be recognizable when a dozen other species are flying.

No. 75.

YELLOW PALM WARBLER.

A. O. U. No. 672a. **Dendroica palmarum hypochrysea** Ridgw.

Synonyms.—YELLOW-BELLIED RED-POLL WARBLER; YELLOW RED-POLL WARBLER.

Description.—Similar to preceding species, but "larger and much more brightly colored, with entire lower parts bright yellow in all stages (excepting nestling plumage); upper parts richer, or less grayish olive than in true *palmarum*" (Ridgway).

Recognition Marks.—Like *D. palmarum*; brighter yellow below.

Nest and *eggs* not peculiar. Not known to breed in Ohio.

General Range.—Atlantic States north to Hudson Bay. Breeds from eastern Maine, New Brunswick and Nova Scotia northward; winters in the South Atlantic and Gulf States.

Range in Ohio.—Casual during migrations.

THE Atlantic coastal wave of migrating Yellow Red-polls occasionally spills over into our state. Not every *yellow* Palm Warbler is to be suspected, for there is great individual variation among the species, and we are near the

eastern boundary where we should expect intergrades. I once followed a bird near Columbus whose yellow had the convincing glow of gold below (*hypochrysea*, gold below); and a specimen exists in the Oberlin College Museum which is undoubtedly referable to this subspecies.

No. 76.

PRAIRIE WARBLER.

A. O. U. No. 673. **Dendroica discolor** (Vieill.).

Description.—*Adult male*: Above olive-green, brightening on crown, with a triangular area of chestnut-rufous spots or confluent streaks on back; below and on sides of head bright yellow, most intense on superciliary, cheek, and throat; with heavy black streaks or stripes on sides of breast and flanks; a blackish line through eye and a broad, black malar stripe; crissum pale, yellowish white; wings and tail dusky with greenish gray edgings on external webs; middle coverts yellowish white on tips; greater coverts edged terminally with gray on outer web, the two forming indistinct bars; two outer pairs of tail-feathers broadly white on inner webs, third pair with central spot; bill blackish; feet dark brown. *Adult female*: Similar to male but duller, and with chestnut-rufous of back much reduced or wanting. *Immature*: Like female but ashy on head (ear-coverts), ashy olive-green above; paler yellow below, etc. Length 4.25-5.00 (108.-127.); av. of four Columbus specimens; wing 2.19 (55.6); tail 1.74 (44.2); bill .37 (9.4).

Recognition Marks.—Smallest of the genus; chestnut-rufous of back distinctive; bears some resemblance to *D. maculosa* below, but smaller and otherwise quite different.

Nest, in bushes or saplings, deeply cup-shaped, composed of fine grasses, plant-fiber, and down, lined with hair. *Eggs*, 4 or 5, white or greenish white, marked with reddish brown and olive-brown, chiefly in a wreath about the larger end. Av. size, .65 x .49 (16.5 x 12.5).

General Range.—Eastern United States to the Plains, breeding from Florida north to Michigan and southern New England. Winters in Southern Florida and the West Indies.

Range in Ohio.—Rare. Probably breeds, but no authentic record.

AFTER *D. kirtlandi* the Prairie Warbler is with us the rarest of the genus. Its normal range lies much farther south, and those which penetrate our state are to be regarded only as pioneers or as adventurers without fixed habits. Professor Jones has seen single males at Oberlin on two different occasions, but there are no records for Ontario; and it seems probable that those birds which reach the Lake Erie shore in spring turn southward again before settling for the summer.

On the 11th of June, 1903, I came across a singing male on a hill-top near Sugar Grove, at the point shown in the illustration. The bird moved restlessly from place to place, singing indifferently from the depths of black-

berry thickets, from the tips of oak saplings, or from the foliage of surrounding forest trees. His time was about equally divided between singing and bug-catching, and altho he might remain in a single clump for five minutes at a time, the bird did not keep the same position for two consecutive seconds. Even during song he would twist and writhe like an Italian prima donna, producing quite as much motion as music.

Taken near Sugar Grove.

Photo by the Author.

A HILLTOP PASTURE.
WHERE THE PRAIRIE WARBLER MAY NEST.

The song of the Prairie Warbler is a little the most remarkable production in the Mniotiltan repertoire. It is a succession of mellow whistling creaks, each note pitched higher than the preceding, and each gaining somewhat in intensity until the next to the last one is reached. The bird runs a weird chromatic scale upon a fairy oboe, with an effect which Dr. Coues describes as "like a mouse complaining of a toothache."

The bird seen at Sugar Grove was entirely destitute of the "brick-red spots upon the middle of the back," usually recommended as a recognition mark, and certain other marks were less distinct than normally in the adult male. It was probably a male of the second summer which had not yet attained adult plumage.

No. 77.

OVEN-BIRD.

A. O. U. No. 674. **Seiurus aurocapillus** (Linn.).

Synonyms.—GOLDEN-CROWNED ACCENTOR; GOLDEN-CROWNED THRUSH.

Description.—*Adult*: Above brownish olive-green; top of head with two blackish lateral stripes, enclosing a space of orange-brown—golden only by courtesy—more or less veiled by olive-brown tips of feathers; cheeks washed with color of back; lores and ring about eye whitish; below white, heavily spotted across breast and on sides by blackish; a narrow blackish malar stripe; bill and feet flesh-colored. Quite variable in size, but little change in plumage with sex or season. Length 5.50-6.50 (139.7-165.1); av. of four Columbus specimens: wing 2.91 (73.9); tail 2.05 (52.1); bill .44 (11.2)).

Recognition Marks.—Small Sparrow size; "golden" crown, and head striped above; general thrush-like appearance.

Nest, on the ground, a slight depression lined and completely overarched with leaves, grasses, bark-strips and trash, and with entrance at side. *Eggs,* 4 or 5, white or creamy white, glossy, speckled and spotted freely with reddish brown and sometimes dull lilac. As usual with this family the markings are frequently wreathed about the larger end. Av. size, .80 x .60 (20.3 x 15.2).

General Range.—Eastern North America north to Hudson Bay Territory and Alaska, breeding from Kansas, the Ohio Valley and Virginia northward. In winter Florida, the West Indies, southern Mexico and Central America to Panama.

Range in Ohio.—Abundant summer resident,—the invariable accompaniment of lowland woods.

BEFORE those extinguishers of ornithological enthusiasm, the mosquitoes, have mustered in full force, it is a pleasure to walk in some dim sequestered wood and watch the antics of the Oven-bird. Not that he is a conscious clown like the Chat; on the contrary he is often as prim and precise as a Puritan dame. And therein lies the fun; for it is always amusing to see a birdikin take himself o'er seriously, and go mincing or strutting about with grand airs. It is amusing too—is it not?—to a person of benevolent intent, when a bird, whose nest has been discovered, goes buzzing about in a mighty huff as tho you were a pirate fleet just landed on his shores. If you have happened upon a ball of grass and leaves like that shown in the illustration, and if the mistress of the "Dutch oven" is at home, you will see such an exhibition of distress, of broken wings and disabled legs, of a shrieking and altogether helpless anatomy, as will make your heart ache,—unless you are wise and laugh. And while the distraught mother is playing lame, the father is adding to the panic by literally falling all over himself in the middle distance—of such strenuous stuff is bird-life made.

The life of the Oven-bird is spent for the most part on the ground. Here it walks sedately or minces daintily, searching the moist humus for grubs and worms, or stirring the dead leaves for hidden treasures. Knowing itself obscure the bird often permits a close approach, and it goes scuttling over the ground oftener than it flies for shelter. But the Oven-bird is no man-with-the-muck-rake. When he would sing it is from the middle branches of a tree, or better. Cautious now, suspecting the very tree-toads, the bird mounts a bare limb, casts searching glances to left and right, walks toward the end of the

Photo by R. F. Griggs.

THE OVEN.

branch, then suddenly surrendering all caution he breaks into utterance. Beginning easily he gains confidence at every step, until the last phrases pierce the woodland and fairly bring the listener to his feet. The crescendo proceeds by a series of little explosions with the ictus on the second syllable of each pair: pechee, pecheé, *pecheé,* PECHEE, PECHEE, *PECHEE.* John Burroughs, writing from the eastern part of New York State, has immortalized this song under the words, *"teacher, teacher, teacher,"* etc., but inasmuch as he expressly states that the accent is placed on the first syllable, the description evidently does not apply to Ohio birds.

Besides the familiar woodland chant, there is a rarer ecstacy song given at twilight. Of this Professor Lynds Jones says, "I have seen the Oven-bird suddenly vault into the air, mounting to the tree-tops on quivering wings, then dart back and forth in a zigzag course as swift as an arrow, and finally burst into song as he floated gently down. The song seems to swing once round a great circle with incredible swiftness but perfect ease, ending in a bubbling diminuendo as the performer lightly touches the perch or ground with half rigid wings held high."

No. 78.

WATER THRUSH.

A. O. U. No. 675. **Seiurus noveboracensis** (Gmel.).

Description.—*Adult*: Above dark olive-brown; below white, tinged more or less with sulphur-yellow, everywhere, except on middle belly, spotted and streaked with the color of the back, finely upon the throat and cheeks, broadly upon the breast; a dark line through eye; a prominent yellowish, or buffy (fulvous) superciliary stripe; cheeks and extreme chin more or less tinged with fulvous; bill brown; feet lighter. Length about 5.50-6.00 (139.7-152.4); wing 2.94 (74.7); tail 2.14 (54.4); exposed culmen .45 (11.4); tarsus .82 (20.8).

Recognition Marks.—Large Warbler size, but most suggestive of small sparrow; superciliary line yellow-tinged, never pure white; sulphur-yellow below (never buffy); throat spotted.

Nesting.—Not known to breed in Ohio. *Nest,* on the ground or in the roots of upturned tree; of moss and leaves, lined with fine rootlets and tendrils. *Eggs,* 4 or 5, white or creamy white, speckled and spotted or wreathed in the usual fashion with reddish browns. Av. size, .77 x .59 (19.6 x 15.).

General Range.—Eastern United States to Illinois, and northward to Arctic America, breeding from the northern United States northward. South in winter to the West Indies, Central America, and northern South America.

Range in Ohio.—Common spring, less common, or less noticeable, fall migrant.

THE Water Thrush is a common migrant during the last week in April and the first two weeks in May, and requires at this season careful distinction from its less common relative, the Louisiana Water Thrush. It is found along streams and at the edges of woodland swamps. The more thor-

oughly the swamp is choked by down timber the better, for it is the Thrush's delight to walk along a fallen log, especially if one end of it passes gradually beneath the black waters. The bird is less wary than the resident form, and will often merely walk to one side when approached; but if driven to take wing it utters a sharp *chink* of farewell, and flies off in great, graceful bounds, which, amid the network of interlacing branches, command admiration both for speed and accuracy.

During the fall migrations, which begin in the latter part of August, the Water Thrushes sometimes fairly swarm, not only in the vicinity of pools and water courses, now less abundant, but under the shade trees and in upland woods. The birds have developed a proper autumnal taste, and to see one working over a patch of fallen leaves is a treat. The industrious little hen siezes in her beak a leaf three times her size, and by a quick jerk tosses it far aside; after which she snaps up the lurking insect prey and passes quickly on to move other worlds.

The song of the northern Water Thrush is not so loud or rich as that of the southern, but it is still sprightly and captivating. *"Sweet, sweet, sweet, chu-chu-wee-chu,"* Professor Jones renders it,—"The first three syllables strongly accented and staccato, the last four short and run together into one phrase, the next to the last a third or more higher. Occasionally one sang *to to che-we che-we che,* the first two indistinct, the third, fifth, and last strongly accented and a sixth higher, the fourth and sixth a little lower. Both songs are high-pitched, clear, liquid whistles that carry far." According to the same authority many are to be found singing vigorously during the fall migrations.

There is some slight possibility that the Water Thrush may be found breeding in the northeastern part of the state. It is found regularly in the central northern counties of Pennsylvania, and has also been reported by Mr. Sennett from Crawford County, which adjoins our Ashtabula.

No. 79.

LOUISIANA WATER-THRUSH.

A. O. U. No. 676. **Seiurus motacilla** (Vieill.).

Description.—*Adult*: Above, dark olive-brown, deeper on crown, more clearly olive on upper tail-coverts; below white with a distinct buffy suffusion on lower belly, flanks, and crissum; spotted and streaked with color of back on breast and sides; throat unspotted; a malar stripe of confluent spots, scattering behind; a dusky line through eye; superciliary stripe and allied areas of head definitely white. Length 5.75-6.40 (146.1-162.6); wing 3.26 (82.8); tail 2.08 (52.8); bill .53 (13.5); tarsus .89 (22.6).

Recognition Marks.—Larger; small Sparrow size; thrush-like appearance, semi-terrestrial habits; throat unspotted and superciliary line definitely white, as distinguished from preceding species.

Nest, in mossy bank or among roots of upturned tree; of sodden leaves and twigs, lined with grass and rootlets and sometimes hair. *Eggs,* 4 or 5, sometimes 6, white or creamy white, speckled and spotted evenly or in wreaths with cinnamon-brown and lilac-gray. Av. size, .76 x .62 (19.3 x 15.8).

General Range.—Eastern United States north to southern New England and southern Michigan, casually north to Lake George, northeastern New York, west to the Plains. In winter West Indies, southern Mexico, and Central America to Panama.

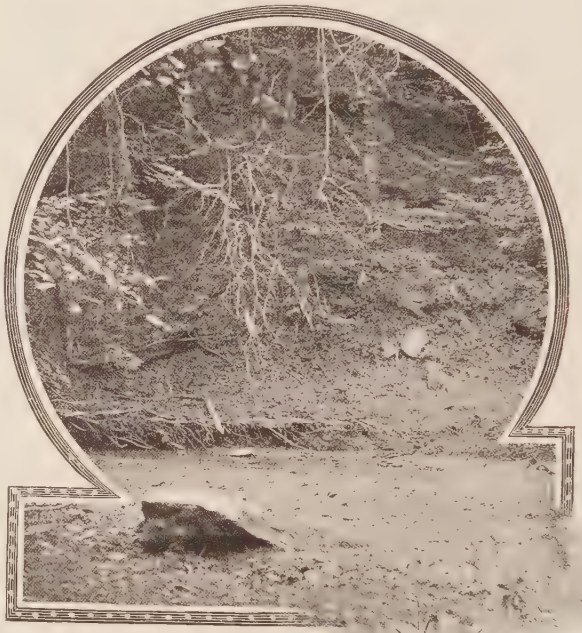
Range in Ohio.—Common summer resident, but of irregular distribution,—along streams and in wilder portion of state, especially the non-glaciated area.

AMIDST our more modest surroundings the Louisiana Water Thrush occupies much the same position relatively that the Water Ouzel does in the mountainous regions of the West. Both birds possess themselves of the wildest in nature which is to be had, and both are the animating spirits of their chosen haunts. Altho no one suspects any structural affinities between the two, a half dozen other close points of resemblance might be noted, not least among which would be poetic temperament and the talent in song.

Only the most picturesque and unfrequented glens are tenanted by this poet-bird from the South. Where cool waters trickle down from mossy ledges and pause in shallow pools to mirror the foliage of many trees, here, and here alone, you will find the Water Thrush at home. The bird will discover himself to you by an imperious *chink* of question and alarm, after which he will pause at the water's edge impatiently, as tho awaiting your withdrawal. The bird stands with the body horizontal or with the hinder parts elevated, jetting the tail vertically from time to time without moving the head, or else bowing with profound but unconvincing gravity. If you are discreet enough to withdraw, or to pretend to, the bird will proceed with the business of getting breakfast, either by wading about in the shallow water, or by

searching noisily among the dead leaves hard by. Nor does he forget to give vent to unallayed suspicions by an energetic *chink*. Or by and by *he* tries hiding, and disappears mysteriously behind a bunch of ferns. One minute, two, three, are allowed to elapse. "Ah, that means a nest," says the shrewd observer; and he moves forward with becoming caution. But the bird is up and off in a trice, and flies down the glen without an apparent pang. A search is made, half-heartedly, with the old result,—"nothing but leaves."

Wherever the nest is to be found (there be those who claim to know, but the author is not one of them), one thing is sure, the bird regards himself as trustee of the whole glen, and his watchful fidelity is impartially bestowed upon all parts of it. If you become especially interested in any one spot—for reasons best known to yourself—why of course he and his wife can go elsewhere; and they move off, sniffing loftily. Every half hour or so the male bird ranges the length of the glen. Now he dashes like a swallow across some open glade. Now he pauses on a log or stone; alternately moving and inspecting until his voice is lost in the distance. You may be near his nest, but he does not deign to notice you, further than to give vent to a disdainful *"humph"* in passing.



Taken in Morgan County.
Photo by the Author.

WHERE COOL WATERS TRICKLE.

The song of the resident Water Thrush is one of our choice things. The bird has found the Pierian spring, tucked away somewhere among our hills—in Morgan County, I think—and has tasted to good advantage. Its notes are wild and ringing clear, but sweet also as honey which the wild bees have made. There is a tumultuous passage in it too, which may occupy only the middle portion or may engulf the whole. At times the singer's main force seems to be expended in the opening peals, so that it almost instantly falls back into a milder cadence or bubbling twitter, in which its warbler affinities are quickly recognized.

As to its platform the musician is not so particular. Usually a free branch from ten to twenty feet high is selected, but I have seen the bird sing his best song while standing knee deep in water. There is said to be also an ecstacy song which lifts the bird quite clear of earth. Audubon declared the Water Thrush's song equal to that of the English Nightingale, but a somewhat less extravagant claim will leave us with a keener appreciation of the bird's real merit.

No. 80.

KENTUCKY WARBLER.

A. O. U. No. 677. **Geothlypis formosa** (Wils.).

Description.—*Adult male*: Crown lustrous black, more or less tipped even in highest plumage, at least behind, by obscure olive or grayish slate; a bright yellow line over eye and curling around it behind; a black patch on side of head, including, lores, produced downward on side of neck as though forming incipent collar; remaining upper parts uniform olive-green; below gamboge yellow, pure and continuous; olive-shaded on sides; bill slightly curved, dark above, light below; feet very pale. *Adult female*: Similar but with perceptibly less black on head, because of more extensive grayish skirtings. *Both sexes in winter*: The black of the crown is further veiled and with brownish tips, while the black on sides of head is partially obscured in the same manner. *Immature birds* lack the black on head or have it concealed in inverse ratio to age. Length 5.25-5.75 (133.3-146.1); wing 2.69 (68.3); tail 1.96 (49.8); bill .44 (11.2).

Recognition Marks.—Medium Warbler size. Pattern of black and yellow on head distinctive, save as regards the "Maryland" Yellow-throat. It is larger and more deliberate in its movements than the latter bird, and differs furtner in having continuous yellow on the lower parts.

Nest, a bulky affair of dead leaves and grasses, lined with rootlets, and sometimes hair; usually on the ground, concealed or not by overgrowth. *Eggs*, 4 or 5, sometimes 6, white or grayish white, speckled, spotted or blotched with umber, cinnamon and lilac-gray, chiefly about larger end. Av. size, .73 x .58 (18.5 x 14.7).

General Range.—Eastern United States west to the plains, breeding from the Gulf States north to southern New England and southern Michigan. In winter, West Indies, eastern Mexico, and Central America to Panama.

Range in Ohio.—Tolerably common summer resident in the southeastern and southwestern portions of the state. Rare or casual elsewhere.

THE local preferences of the Kentucky Warbler lie about midway between those of the Oven-bird and the Louisiana Water Thrush; and there is much in the bird's appearance and manner to remind one of its near relationship to the *Sciuri*. But the bird is no mere echo of another more illustrious; its ways are its own, and its personality most marked. Damp hillsides, heavily wooded and with dense undergrowth, are the chosen haunts of this distinguished Warbler, especially if at the bottom of the hill there

Taken in Douda Run. *Photo by the Author.*

A BIT FROM KENTUCKY'S RANGE.

is a half-open glade set about with bush-clumps and a tiny stream of water trickling through it. Here the Warbler seeks its food upon the ground, *walking* instead of hopping over its surface, stooping to peer under a projecting stone, turning over a suspected leaf, and nimbly gathering in the scurrying harvest. Now the bird flits up to a fallen log and measures its length, now dives into a cranny behind it, and now emerges again in time to leap into the air for a passing insect. Through long association with mother earth the

Kentucky Warbler, has also acquired, tho in a lesser degree, that strange bobbing motion of the tail peculiar to many ground-haunting species.

Interest in this bird is heightened by the fact that it is exceedingly shy, not only keeping to the wilder glens and out-of-the-way places, but carefully avoiding exposure of its golden plumage when found. More than once the bird-man has crept on hands and knees through a thicket to obtain a glimpse of this demure beauty, thus rendering an homage which a less modest bird could not have compelled. Like most birds, however, the male Kentucky lays aside inconvenient scruples during the season of song, and his voice is one of the boldest as well as sweetest in the woods. At this time he mounts a low branch, and, standing lengthwise, pours out at frequent intervals a clear, rich, ringing strain of three or four similar notes. "*Peé-u-dle, peé-u-dle, peé-u-dle,*" he seems to Mr. E. J. Arrick of McConnellsville to say; while other birds less commonly accent the last syllable of each phrase, *tit-oo-reét, tit-oo-reét, tit-oo-reét.* So intent does the bird become upon his music that if frightened from one perch he will immediately resume his song upon another.

As in the case of all ground-nesting warblers, the nest is rather difficult to find, since it is committed to the protection of some obscure weed-clump or sapling. The surest method of discovery is to spy upon the female while the nest is a-making. According to Messrs. Morris and Arrick, who have had great success in finding the nest of this Warbler, they are to be sought upon the bottoms of the glades rather than upon the hillsides, where the birds otherwise spend the greater portion of their time.

No. 81.

CONNECTICUT WARBLER.

A. O. U. No. 678. **Geothlypis agilis** (Wils.).

Description.—*Adult male*: Whole head and neck and fore breast grayish slate, deepest on fore breast and crown; a white orbital ring; remaining upper parts, including wings and tail, olive-green unmarked; below from breast, pale yellow, the sides tinged with olive; bill dark above, light below; feet light brown. In highest plumage the fore breast is almost, but never quite, black. In autumn the ash of nape is obscured by olive-green skirtings. *Adult female and immature*: Similar to male, but brownish olive-gray instead of slaty on head and neck; the olive of upper parts browner, not contrasting with crown, and thence shading on sides of neck into the browner gray of throat; below dingier yellow, and more heavily shaded by brownish olive on sides. Length 5.20-6.00 (132.1-152.4); wing 2.80 (71.1); tail 1.91 (48.5); bill .43 (10.9).

Recognition Marks.—Larger; grayish slate of male, without black, and contrasting with pale yellow below; female and young obscure brownish olive and yellowish birds, without definite contrasts.

Nesting.—Does not breed in Ohio. *Nests* described from Manitoba and Ontario, of dry grass, or of grass, leaves and trash, lined with hair, on the ground. *Eggs,* 4, white with a few spots of lilac, purple, brown, and black about the larger end. Av. size, .75 x .60 (19.1 x 15.2) (Thompson).

General Range.—Eastern North America, breeding north of the United States. Northern South America in winter.

Range in Ohio.—Quite rare, during migrations.

OF the forty species of Warblers now accredited to Ohio, this is the one bird which has successfully eluded the author's search afield, so that he may perhaps be pardoned some little emotion in setting it down as "quite rare". Others have been more fortunate: Dr. Kirtland in 1838 took one specimen; Dr. Langdon reports one taken near Cincinnati by Mr. Dury in the spring of 1876; Dr. Wheaton saw two during his twenty years' residence in Columbus; Professor Jones reports recently two birds seen near Oberlin; and Rev. W. F. Henninger a pair taken at Waverly, August 10, 1899.[1]

Mr. Ernest E. Thompson, who was the first to find the nest of the Connecticut Warbler, says of it: "This species has somewhat the manners of the Vireos, but it is much more active and sprightly in its movements. During the migrations it is generally found on or near the ground in the undergrowth of low damp woods, and also in bordering weedy fields, where it sometimes announces its presence by a sharp *peek.* In the cold boggy tamarack swamps of Manitoba, where I found it breeding, it was the only one of the family and almost the only bird, whose voice broke the silence of those gray wastes. Its loud song was much like the *teacher, teacher* chant of the Oven-bird, but it also uttered another, which I can recall to mind by the aid of the syllables, *'free-chapple, free-chapple, free-chapple, whoit.'* "

Mr. M. C. Read, writing in "The Family Visitor" in 1853, says, "This species is described as very rare, but for the two summers past I have noticed it as very abundant in a field of dense brambles, in Andover, Ashtabula County. In its habits it resembles the preceding (*Trichas marylandica*) [now *Geothlypis trichas brachidactyla*] or rather the peculiar habits of the genus are strikingly exhibited in this species. * * * They undoubtedly nest with us in considerable numbers." Whether Mr. Read was correct in his surmise we cannot now determine. If true, it is quite probable that the northward trend of species has long since removed the Connecticut Warbler from the list of our breeding birds.

1 While looking through the O. S. U. collection and since writing the above, I came upon a specimen of this species secured on the O. S. U. grounds by Mr. J. B. Parker, Oct. 8, 1898. Its appearance instantly recalled that of an obscure *Geothlypis* of which I had obtained several tantalizing glimpses on the 7th of October 1901—probably in the same thicket where Mr. Parker captured his bird—and which I had set down tentatively as an immature male of the Kentucky Warbler. A sober thought, however, of the late date, and the appearance of the O. S. U. specimen in the same plumage convince me that it was an immature Connecticut Warbler. The bird gave little snatches of song quite unlike anything else I ever heard.

No. 82.

MOURNING WARBLER.

A. O. U. No. 679. **Geothlypis philadelphia** (Wils.).

Description.—*Adult male*: Whole head and neck and fore breast slaty gray, intermixed below with black, which emerges clear on the fore breast; lores and orbital ring black; remaining plumage bright olive-green above, shading into bright yellow below; bill dark above, pale below; feet very light brown. *Adult female and immature*: Similar, but slate of head more or less overcast by olive-green; throat dull white or brownish white,—even yellowish; fore breast dull ashy or grayish brown, shading imperceptibly on sides of neck, etc. Length 5.00-5.75 (127.-146.1); wing 2.43 (61.7); tail 2.11 (53.6); bill .43 (10.9).

Taken near Oberlin. *Photo by the Author.*

WARBLER CORNER AGAIN.

THE THICKETS IN THE FOREGROUND AFFORD SHELTER TO MOURNING, WILSON AND NASHVILLE WARBLERS, AND NORTHERN YELLOW-THROATS.

Recognition Marks.—Smaller; black conspicuous in slaty gray of breast,—abruptly contrasting with yellow below. Female and young obscure, but affording suggestion of contrast on breast when closely scrutinized.

Nesting.—Not known to breed in Ohio. *Nest,* on or near the ground, of bark-strips, vegetable fibers and trash, lined with grasses and rootlets and sometimes horsehair. *Eggs,* 4, white, dotted with cinnamon-red near larger end. Av. size, .72 x .52 (18.3 x 13.2).

General Range.—Eastern North America to the Plains, breeding from the mountainous portions of Pennsylvania, New England, New York and northern Michigan northward. Central America and northern South America in winter. Accidental in Greenland.

Range in Ohio.—Rather rare spring and fall migrant.

ALTHO deeply veiled in crape as to its head this rare Warbler is a thing of beauty. Its beauty is, however, still further veiled—from human eyes—for it is one of the most persistent of skulkers. During its migrations it passes from copse to copse by night, and remains in hiding by day with almost as much care as that exercised by escaping slaves in the days of the Underground Railroad. One sees just enough of them now and then to know that they are sprightly birds, graceful of movement and keen of eye. Occasionally one may be found in an unguarded moment exploring the tree-tops, but more frequently the coveted glimpse is obtained only by trampling on brush piles or beating outlying thickets.

It is not impossible that the Mourning Warbler may be found breeding in our state, since it is common in New York and New England, and has been reported breeding in Illinois "even south of latitude 39 degrees.[1]"

The bird is sometimes found singing during the northern movement, especially in the Lake Erie counties. Professor Jones gives it "*tee, te-o, te-o, te-o, we-se,* the last couplet accented and much higher pitched." Rev. J. H. Langille states that the breeding song varies considerably, but "may generally be denoted by the syllables, *free, free, free, fruh, fruh,*—the first three being loud and clear and the last two in a lower tone, and so much softer and shorter that a moderate distance, or a slight breeze in the opposite direction, may prevent one from hearing them."

1 Prof. W. W. Cooke, Bull. No. 2, Div. of Economic Ornithology, U. S. Dept. Agr., p. 258.

No. 83.

NORTHERN YELLOW-THROAT.

A. O. U. 681d. **Geothlypis trichas brachidactyla** (Swains.).

Synonym.—Formerly included under MARYLAND YELLOW-THROAT.

Description.—*Adult male*: A black band or mask on forehead and cheeks, bordered on superior margin by a narrow band of ashy white; remaining upper parts dull olive-green, brightening on rump, with a brownish cast on crown and sometimes on wings and tail; chin, throat, fore breast and crissum bright gamboge yellow; lower breast and belly paler: sides washed with brownish; bill black above, light below; feet pale. *Adult female*: Similar, but without black mask,—grayish brown instead; forehead touched with brownish red; much paler yellow below; sides of breast and sides more heavily brownish. *Male in autumn*: Browner above and on sides; black mask tipped with grayish; more yellow on belly. *Immature male*: Similar to adult, but browner, and showing only traces of black mask; throat paler yellow; chin and breast less pure, inclining to saffron. Under tail-coverts yellow at all ages and in all seasons. Length 4.75-5.75 (120.6-146.1); av. of four Columbus males: wing 2.40 (61.); tail 2.00 (50.8); exposed portion of culmen .43 (10.9).

Recognition Marks.—Smaller; black facial mask bordered by ashy; yellow on throat and breast, changing to yellowish on belly, and brownish on sides,—in contrast with the uniform yellow of the under parts in *G. formosa.*

Nest, sunken in grass tussock or bush clump on or near ground, a bulky but neat structure of weed-stalks, bark-strips, leaves of *Typha latifolia,* grasses, etc., carefully lined with grass or hair. *Eggs,* 4, or 5, white or creamy white, speckled, spotted, and sometimes obscurely scrawled, chiefly about larger end, or not, with umber or black. Av. size, .70 x .52 (17.8 x 13.2).

General Range.—Northeastern United States and southeastern British Provinces, from northern New Jersey, Tennessee and east-central Texas northward; south in winter to West Indies and through Mexico to Central America.

Range in Ohio.—Common summer resident, of universal distribution throughout the state, in swamps and lowland thickets.

ACCORDING to a recent decision of our ornithological Sanhedrin, the A. O. U. "Committee", we are obliged to forego the use of the title "Maryland", endeared by long usage, but absurdly inappropriate, as are a dozen other bird names which merely perpetuate accidents of discovery. We might also easily improve upon the name "Yellow-throat" as a distinctive cognomen, for there are at least sixteen other birds belonging to the same family and found within the borders of our state which have throats more or less yellow. But who that has once seen the bird, can forget the broad black facial mask, surmounted by its narrow white band, or fillet, which really serves to distinguish this Warbler from all others? Better far call it the Masked Warbler, the Masquerader, or Domino.

Indeed, one never gets over the impression that this pert little Warbler

is concealing an amused smile behind that inscrutable black mask, and that he is poking fun at you for awkwardness and stupidity, of which you know you are guilty, as you stumble about through the thicket in the wake of the retreating mocker. There is no reasonable doubt that the bird delights in a game of hide-and-seek and that he shows himself from time to time just far enough ahead to keep up the tantalizing play. But if you are wise enough to give it up the bird will presently hop out squarely into the open to look at *you*. Thus life's truest pleasures come unsought.

Taken in Franklin County. *Photo by the Author.*

WHERE YELLOW-THROATS PLAY HIDE-AND-SEEK.

The Yellow-throats arrive from the south sometime during the last week in April, and thenceforth wherever there are willow-thickets bordering streams,

or marshy weed-lots, or over-grown fences running through lowland meadows, there are they. The male spends much time singing, seeking for the purpose the summit of a weed-stalk or a flowering shrub, or occasionally mounting a sapling twenty or thirty feet high. *Witchity, wichity, wichity,* or *"I beseech you, I beseech you, I beseech you"*, sounds forth at intervals in sharp anatriptic notes which pierce the morning chorus for a hundred yards.

Meanwhile the plainly attired but dainty female is weaving a bulky nest in some weed-clump or grass-tussock hard by. Sometimes it is sunk in the center of a tussock almost to the level of the ground. At others it is lodged in the spreading branches of a bush, or else the crowded heads of certain plants are brought together and made both to support and shelter the tightly-woven structure. The nest is a model of strength, and notwithstanding its usual bulkiness, is well moulded and neatly lined within. According to Dr. Jones the male bird assists somewhat in the construction of the nest, and both birds watch over it with jealous care. Two broods are commonly reared during the season, one in May and another in July. When the nest is threatened, or indeed at any time when intruders are about, the birds give frequent voice to a most peculiar and distinctive note, a sort of Polish consonantal explosion, *wzschthub*—a sound not unlike that made by a guitar string when it is struck above the stop.

No. 84.

YELLOW-BREASTED CHAT.

A. O. U. No. 683. **Icteria virens** (Linn.).

Description.—*Adult male*: Above dull olive-green; fuscous on exposed inner webs of wings and tail; a prominent line above lores and eye, a short malar stripe, and eye-ring, white; enclosed space black on lores, less pure behind; throat, breast, lining of wings, and upper sides rich gamboge yellow; lower belly and crissum abruptly white; sides washed with brownish; bill black; feet plumbeous. *Adult male*: Very similar; bill lighter; lores and cheek-patch dusky rather than black; black appreciably lighter. *Young*: Dull olive above; head markings of adult faintly indicated; below grayish white, darker on breast, buffier behind. Length 6.75-7.50 (171.5-190.5); wing 3.01 (76.5); tail 3.01 (76.5); bill .53 (13.5).

Recognition Marks.—Strictly "Sparrow" size, but because of bright color having nearer the size value of Chewink;—the largest of the Warblers. Bright yellow breast with contrasting white below, with size, distinctive.

Nest, placed in thickets, preferably briar, three to five feet from ground, composed outwardly of dried grass-stems and weed-stalks, centrally of layers of dried

leaves, carefully wrapped, and within of fine grasses and horse-hair. *Eggs*, 3-5, white, rather openly spotted or minutely speckled with reddish brown. Av. size, .90 x .70 (22.9 x 17.8).

General Range.—Eastern United States to the Plains, breeding north to Ontario and southern New England; south in winter to eastern Mexico, Guatemala, Nicaragua, and Costa Rica.

Range in Ohio.—Abundant in south and central Ohio, decreasing northerly. In some northern localities rare.

Taken near Columbus.

Photo by the Author.

THE HAUNT OF THE CHAT.

IF there is a feathered oddity in America, it is the Yellow-breasted Chat; and when you listen to his quaint medley of calls, caws, squawks, pipings and objurgations, you almost feel that the scientists must be as queer as himself for having placed him among the Warblers. Structurally he does belong to this family, but his vocal performances are about as far from warbling as midnight is from midday.

His home is in the thickets along the border of the woods or in the undergrowth of partial clearings. As you approach his haunt, you will hear a low, querulous "*Cook-cook-cook,*" suggesting a world of apprehension, as

if he were saying, "There comes a brigand! Now our nests will all be robbed!" You draw nearer, and presently you are greeted with a loud *"Caw!"* and you look around for a crow. If you persist in going into his home, you will receive a "tongue-lashing" that will make your ears tingle, and it does not require a far stretch of the imagination to make you feel that he is quoting profane history at you. He has an extended vocabulary, especially of epithets. Unless you are acquainted with his ways, you will think a half dozen birds are berating you instead of only one.

Taken near Waverly. *Photo by Rev. W. F. Henninger.*

THE CHAT'S NEST.

It may be a good while before you see the author of all this jargon, and you are almost ready to quote Wordsworth's famous lines to a Cuckoo,—

"Shall I call thee bird,
Or but a wandering Voice?"

But presently he creeps slyly to the top of a bush, and you catch the gleam of his rich yellow breast, and note his black mask, while he continues his vituperations, his throat bulging out like that of a croaking frog. The first time

you hear him you decide that Nature, in a fit of humor, intended him for a feathered clown; but when you see him, and observe his serious air, his intent gaze, and his nervous movements, you conclude that, after all, he is not in fun, but that with him "life is real, life is earnest." He is either whistling to keep his courage up, or else his agitation is so great that he must give expression to it.

Taken in Pike County. *Photo by Rev. W. F. Henninger.*

NOT WORTH SCOLDING ABOUT.

One of his quaintest performances is to dart out into the air with a loud cry, hold his flapping wings far above him, and let his body and legs dangle loosely while he swings down again into the tanglewood. The nests of the Chats are bulky affairs, and are built in the bushes. A few strands of grapevine were woven into almost every nest I have ever found, and I have discovered scores of them not only in Ohio, but also in many other States.

LEANDER S. KEYSER.

No. 85.

HOODED WARBLER.

A. O. U. No. 684. **Wilsonia mitrata** (Gmel.).

Description.—*Adult male*: A golden mask, including forehead and cheeks, superimposed on a black hood, which covers the head and neck all around and reaches the fore-breast; back, etc. bright olive-green; wings and tail fuscous with olive-green edgings; the two outer pairs of tail feathers white on the inner webs for exposed length; remaining under parts, including lining of wing, bright yellow, abruptly contrasting with the black of hood; bill and rictal bristles black; feet pale. *Adult female*: Black hood much less distinct or wanting,—showing only traces of black on nape, etc.; outlines of golden mask sometimes indistinguishable below, partially veiled by olive-green skirtings above; under parts impure yellow. *Immature male*: Like adult male, but the black feathers of hood with

HOODED WARBLER
Wilsonia mitrata
Life-size

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yellow tips. Length 5.00-5.75 (127.-146.1); wing 2.60 (67.0); tail 2.30 (59.0); bill .40 (10.2).

Recognition Marks.—Warbler size; black hood and golden mask of male; yellow forehead and black rictal-bristles of specimens lacking the hood.

Taken near Oberlin. *Photo by the Author.*

"HERE THE BIRDS SPEND THEIR TIME FLY-CATCHING ALONG THE MIDDLE LEVELS.

Nest, in bushes or saplings from one to five feet up, of bark-strips, leaves, grass, and trash, more or less interwoven with spiders' silk, and lined with hair or fiber. *Eggs,* 4 or 5, white or creamy white, dotted and spotted with reddish brown or umber, chiefly in wreath about larger end. Av. size, .71 x .51 (18. x 13.).

General Range.—Eastern United States west to the Plains, north and east to southern Michigan, southern Ontario, western and southeastern New York and southern New England. Breeds from the Gulf of Mexico northward. In winter West Indies, eastern Mexico and Central America to Panama.

Range in Ohio.—Rare summer resident, locally restricted.

Taken near Jefferson. *Photo by Robt. J. Sim.*

A HOODED WARBLER'S NEST.

TAKE a lump of molten gold fashioned like a bird, impress upon it a hood of steel, oxidized, as black as jet, overlay this in turn with a half-mask of the gold, tool out each shining scale and shaft and filament with exquisite care, and you may have the equal of one of those ten thousand dollar vases of encrusted steel and gold, which the Spanish are so clever at making, an heirloom to be handed down from father to son. But let Nature breathe upon it; let the Author of Life give it motion and song; and you will have a Hooded Warbler, not less beautiful that

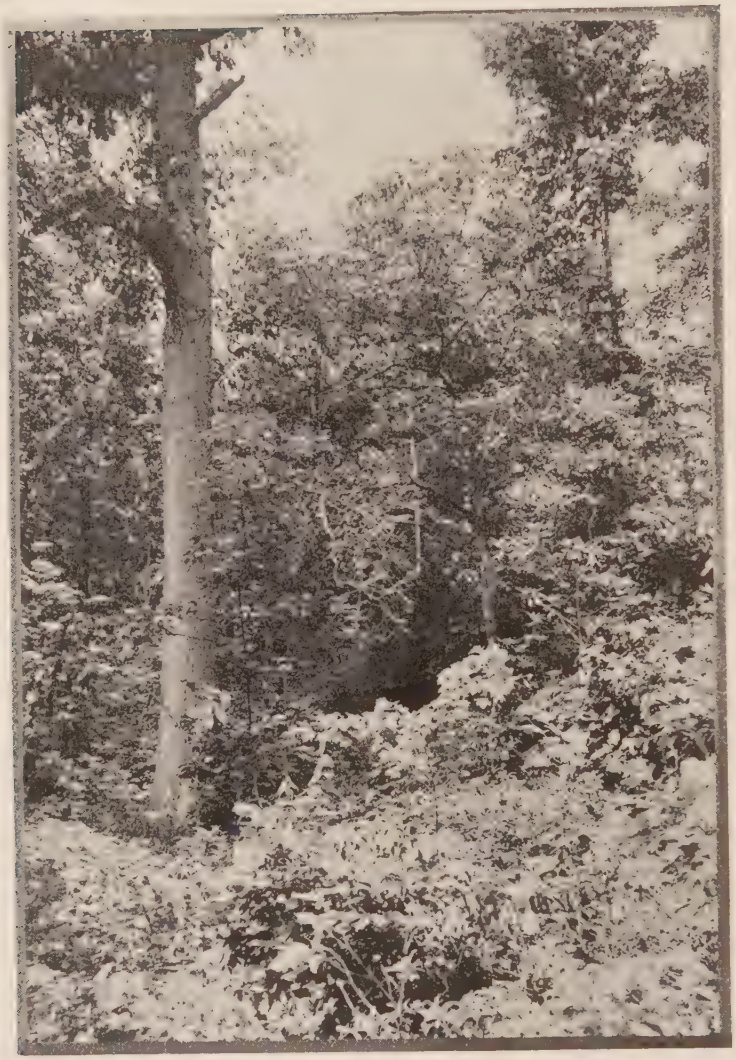
you cannot handle it, but infinitely more so in that its beauty takes a thousand forms, a fresh one for every turn of fancy that may stir an avian breast.

The further charm of comparative rarity is added to this exquisite creation, so that not a few of us count upon our fingers the occasions upon which we have been granted a sight of it. To me the bird first came as a voice, a sweet and pure but altogether puzzling sound, tossed down from a treetop on a foggy morning, an hour before dawn. The bird was at an unheard-of distance from his chosen range, so when the sun dissolved the mist and disclosed the singer, sitting quietly, and piping in accents unconstrained, it seemed to us as tho we had caught a fairy overstaying his time limit.

The Hooded Warbler shows a decided preference for damp woods where there is plenty of undergrowth. Beech woods are favorite places if the other conditions are suitable. Here the birds spend their time fly-catching along the middle levels, or descend to search the brush. The tail is sometimes carried

Taken near Sugar Grove. *Photo by the Author.*

SLEEPING BEAUTIES.



Taken near Sugar Grove. *Photo by the Author.*

WHERE THE "BEAUTIES" TOOK THEIR FIRST LESSON IN NATURE STUDY.

half-open after Redstart's well-known fashion; but otherwise the birds are much less fussy than their salmon-spotted neighbors.

Like most Warblers the Hooded has a *chip* note of alarm which is distinctive to practiced ears, while the male has a song which is quite marked, *tsu-e, tsu-e, tsu-e, tsu-wĕe-tsu.* The notes are ringing and musical, but the last two contain a sort of vocal somersault, as tho the bird were attacked by a sudden inclination to sneeze. These last notes, therefore, closely resemble the dainty cachination of the Acadian Flycatcher, and would undoubtedly be mistaken for those of the latter bird if heard alone. This is the common song, but some, probably many, variant forms occur. One bird, which haunted the beech-woods shown in the first illustration, rendered the typical song, but had also a fashion of bringing in the sneeze early, and finishing strong in spite of the interruption.

The nests in the illustrations speak for themselves, and it is only neces-

sary to add that they were placed, the one in an oak and the other in an alder sapling, at a height of about two feet from the ground. In feeding the young in the Sugar Grove nest the parents would invariably appear upon a certain bare twig some fifty feet above; here, if observed, the bird would chirp apprehensively for a minute or two, and then without further precaution launch straight for the nest.

The Hooded Warbler is possibly on the increase. I have seen it twice at Columbus and twice at Oberlin within three years, but have not suspected it of nesting at either place. Mr. Robert J. Sim reports it as a regular breeder in Ashtabula County, while Rev. W. F. Henninger reports it as rare in Scioto County in summer.

No. 86.

WILSON WARBLER.

A. O. U. No. 685. **Wilsonia pusilla** (Wils.).

Synonym.—Black-capped Warbler.

Description.—*Adult male*: Above bright olive-green; forehead, sides of head, and under parts bright greenish yellow, usually tinged or vaguely clouded with olive; crown or "cap" lustrous black; wings and tail fuscous and olive-edged, without peculiar marks; bill dark above, light below; feet light brown. *Adult female*: Similar, but the black cap usually wanting, or if present, less distinct. *Immature*: Like female, without cap. Length 4.25-5.10 (108.-129.5); av. of ten Columbus males: wing 2.20 (55.9); tail 1.90 (48.3); bill .32 (8.1).

Recognition Marks.—Least, pygmy size; black cap of male; recognizable in any plumage by small size and greenish yellow coloration. Keeps well down in bushes, weed-patches, and thickets.

Nesting.—Does not breed in Ohio. *Nest,* of grass, leaves and trash, lined with fine grass or hair, on the ground, often partially concealed by grass or weeds. *Eggs,* 4 or 5, white or pinkish white, minutely speckled with reddish brown, sometimes in wreath about larger end. Av. size, .60 x .49 (15.2 x 12.6).

General Range.—Eastern North America west to and including the Rocky Mountains, north to Labrador, Hudson Bay Territory and Alaska. Breeds chiefly north of the United States, migrating south to eastern Mexico and Central America.

Range in Ohio.—Fairly common spring and fall migrant. Ranges low in brush patches or weed thickets.

AMONG the least of Warblers, the pretty little Black-cap is known throughout the state as a not uncommon but somewhat irregular migrant.

In spring it may be entirely missing, but in the fall it is pretty sure to be found among the willows or in weed-thickets, keeping company with Nashville and Tennessee Warblers. At all times it is somewhat confined to undergrowth or rank vegetation, especially that which grows along the banks of streams. No bush or briar tangle, however intricate or strange, appears to present any obstacle to this masterful bush-ranger. A bird dives into a bush near at hand, and you are ready to take oath as to its near whereabouts, when lo, it reappears rods away and at the other side of the patch.

Only now and then is a migrant bird found singing, and we cannot be quite sure that we ever hear the proper song, since the birds go so far north to breed. One heard repeatedly from the center of a bush clump about three feet high said, "*Chi, chipititity, chi, chi.*" "Its song is compared by Minot to that of the Redstart or Yellow Warbler; while Nuttall writes it '*tsh-tsh-tsh,tshea,*' and to Goss it sounds like '*zee-zee-zee-zee-e.*'" These are all quite unlike the breeding song of the allied form *W. p. chryseola,* to which I have listened repeatedly in Western Washington; this is a rapidly uttered and emphatescent *chip, chip! chip!! chip!!! chip!!!!*

No. 87.

CANADIAN WARBLER.

A. O. U. No. 686. **Wilsonia canadensis** (Linn.).

Synonym.—CANADIAN FLY-CATCHING WARBLER.

Description.—*Adult male in spring*: Above bluish ash; wings and tail unmarked; crown marked with lanceolate black centers of feathers, the ashy skirtings becoming obsolete on extreme forehead; loral spot, cut off in front, connecting with broad cheek-patch, black; supraloral spot connecting with under parts, yellow; under parts, except crissum, yellow, with a greenish cast; a broad loose necklace of black spots on fore breast, and connecting with black of cheeks; lower tail-coverts white; bill black above, light below; feet light. *Adult female and immature*: Like male, but with black subdued; necklace faintly indicated by dusky spots; occasionally an olivaceous tinge on back. *Male in autumn*: Richer yellow below; yellow sometimes tipping spots of necklace. Length 5.00-5.75 (127.-146.1); av. of six Columbus males: wing 2.56 (65.); tail 2.09 (53.1); bill .39 (9.9).

Recognition Marks.—Medium Warbler size; bluish ash of upper parts; yellow of under parts; necklace of black spots across breast; rictal-bristles.

Nesting.—Not known to breed in Ohio. *Nest,* of leaves, grass, moss, and bark-strips, lined with fine rootlets, and placed on ground inside of bank, or under protection of log, root, or bush-clump. *Eggs,* 4 or 5, white, spotted and dotted with rufous brown, chiefly about larger end. Av. size .67 x .51 (17. x 13.).

AMERICAN REDSTART
Setophaga ruticilla
Life-size

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General Range.—Eastern North America west to the Plains, and north to Newfoundland, southern Labrador and Lake Winnipeg. South in winter to Central America and northern South America. Breeds from the higher parts of the Alleghanies and the more elevated portions of southern New York and southern New England northward.

Range in Ohio.—Common spring and early fall migrant.

AMONG the later migrants may usually be seen each season a few of these exquisite fly-catching Warblers. In their breeding haunts, which lie far to the north of us, they range low in the bushes and often descend to the ground, but when traveling they seem to find better company in the tree-tops, and appear very much at home there. There is something so chaste in the clear yellow of the throat and chest, spanned tho it is by a dainty necklace of jet, and something so modest and winsome withal in the bird itself, that some of us go into reverent ecstacies whenever we see one of them.

The song is only occasionally rendered during the migrations, but seems to increase in frequency, as we should expect, as the bird proceeds northward. Some have likened it to that of the Yellow Warbler; but to my ears it bears a strong generic resemblance to that of the Hooded Warbler. At any rate it is clear, sprightly and vigorous. *Chut, tutooï't, tutooeét* is one rendering, probably less characteristic and complete than Mr. Thompson's classical interpretation *"Rup-it-chee, rup-it-chee, rup-it-chit-it-lit."*

The Canadian is among the earliest of the returning Warblers, having been seen in the southern part of the state as early as August 24th. At this season the species is somewhat puzzling, by reason of the frequent absence, or half suppression, of the characteristic necklace. On the return journey, also, the birds are much more apt to be found in thickets, or low in well watered glens.

No. 88.

AMERICAN REDSTART.

A. O. U. No. 687. **Setophaga ruticilla** (Linn.)

Description.—*Adult male*: Head and neck all around and breast shining black; remaining upper parts dull black with glossy patches, changing to brownish black or fuscous on wings; a large salmon-colored patch at base of secondaries; a smaller, nearly concealed patch of same color at base of primaries; the outer web of the outer primary salmon nearly throughout its length; the tail feathers, except the two middle pairs, salmon-colored on both webs for the basal two-thirds; two large patches of reddish salmon on the sides of the breast; the

lining of the wings and the sides extensively tinged with the same color, occasionally a few touches across the chest below the black; lower breast, belly, and crissum, white; bill black; feet dark brown; black in variable amounts on sides of breast between the orange-red spots; lower tail-coverts sometimes broadly tipped with blackish. *Adult female*: Above, brownish ash with an ochraceous or olive tinge on back; salmon parts of male replaced by yellow (Naples yellow), and the reddish salmon of sides by chrome yellow; remaining under parts dull whitish, sometimes buffy across chest. *Immature male*: Similar to adult female, but duller the first year; the second year mottled with black; does not attain full plumage until third season. Length 5.00-5.75 (127.-146.1); av. of five Columbus males: wing 2.59 (65.8); tail 2.17 (55.1); bill .36 (9.1).

Recognition Marks.—Medium Warbler size; black with salmon-red and salmon patches of male; similar pattern and duller colors of female and young; tail usually half open and prominently displayed, whether in sport or in ordinary flight.

Nest, in the fork of a sapling from five to fifteen feet up, of hemp and other vegetable fibers, fine bark, and grasses, lined with fine grasses, plant-down and horse-hair. *Eggs,* 4 or 5, greenish, bluish, or grayish-white, dotted and spotted, chiefly about larger end, with cinnamon-rufous or olive-brown. Av. size, .68 x .51 (17.3 x 13.).

General Range.—North America north to Fort Simpson, west regularly to the Great Basin and casually to the Pacific Coast States, breeding from the middle portion of the United States northward. In winter, the West Indies, southern Mexico, Central America, and northern South America.

Range in Ohio.—Abundant summer resident throughout the state, more common during migrations.

THE "start" of Redstart is from the old Anglo-Saxon *steort,* a tail; hence, Redstart means Redtail; but the name would hardly have been applied to the American bird had it not been for a chance resemblance which it bears to the structurally different Redstart of Europe, *Ruticilla phoenicurus.* In our bird the red of the tail is not so noticeable as is the tail itself, which is handled very much as a coquette handles a fan, being opened or shut, or shaken haughtily, to express the owner's varied emotions.

The Redstart is the presiding genius of woodland and grove. He is a bit of a tyrant among the birds, and among his own kind is exceedingly sensitive upon the subject of metes and bounds. As for the insect world he rules it with a rod of iron. See him as he moves about through a file of slender poplars. He flits restlessly from branch to branch, now peering up at the under surface of a leaf, now darting into the air to secure a heedless midge, and closing upon it with an emphatic snap, now spreading the tail in pardonable vanity or from sheer exuberance of spirits; but ever and anon pausing just long enough to squeeze out a half-scolding song. The paler-colored female, contrary to the usual wont, is not less active nor less noticeable than the male, except as she is restrained for a season by the duties of

incubation. She is even believed to sing a little on her own account, not because her mate does not sing enough for two, but because she—well, for the same reason that a woman whistles,—and good luck to her!

During the mating season great rivalries spring up, and males will chase each other about in most bewildering mazes, like a pair of great fire-flies, and with no better weapons—fighting fire with fire. When the nesting site is chosen the male is very jealous of intruders, and bustles up in a threatening fashion, which quite overawes most birds of guileless intent.

Redstart's song is sometimes little better than an emphatescent squeak. At other times his emotion fades after the utterance of two or three notes,

Taken near Danville. *Photo by J. B. Parker.*

A FAIRY BONBON.

PAPA REDSTART IS PRESENTING HIS BABY WITH A CADDIS-FLY.

and the last one dies out. A more pretentious effort is represented by Mr. Chapman as "*ching, ching, chee; ser-wee, swee, swee-e-e-e.*" Because of the bird's abundance many variations are noted, and, indeed, the Redstart's song is often quite puzzling, especially if it proceeds from a colorless young stripling of one summer.

One knows exactly where to look for the Redstart's nest, but for all that it is not easy to see a "knot" in the fork of a young sapling, matched to a nicety with the surrounding bark, and oftenest hidden by a leaf or two—not many, but just enough. The fabric is a model of daintiness and close weaving. Strips of the inner bark of common milkweed or shredded grape-vine

bark form the bulk of the nest. The structure does not often embrace the sustaining brances, but the ends of its component strips are made fast to the rough bark of the sapling; besides this, frequent guy ropes and stays of gossamer are thrown out. A snug lining of roller grass and horse-hair completes the home, which measures commonly one and seven-eighths inches across and one and a half deep, inside. Two broods are sometimes raised in a season.

No. 89.

HORNED LARK.

A. O. U. No. 474. **Otocoris alpestris** (Linn.).

Synonym.—SHORE LARK. (This name is perpetuated solely through an accident of discovery, the type specimen having been described by Catesby from "the Seashore of Carolina.").

Description.—*Adult male in breeding plumage*: Upper parts warm brown or fuscous, clearest on wings and tail, feathers everywhere heavily edged with rufous; middle of crown, occiput, nape, sides of neck, bend of wing, and upper tail-coverts, pinkish cinnamon; fore-crown, cheeks and juguiar crescentic patch black; forehead, superciliary stripe, auriculars and throat primrose yellow; belly and crissum white; sides and flanks brownish. *Adult female*: Similar to male, but duller and paler, the black especially being obscured by brownish or buffy tips. *Winter plumage of both sexes* distinguished by somewhat heavier and more uniform coloring, save on black areas, which are overcast by buffy tips; fore breast dusky or obscurely spotted. Length about 7.75 (196.9); av. of four Columbus males: wing 4.26 (108.2); tail 2.87 (72.9); bill .48 (12.2); tarsus .84 (21.3).

Recognition Marks.—Sparrow to Chewink size; black throat and head patches; feather tufts or "horns" directed backward. To be distinguished from *O. a. praticola* by its larger size, and from *O. a hoyti* by the fact that *both* throat and superciliary line are *yellow*.

Nesting.—Does not breed in Ohio. *Nest,* a cup-shaped depression in the surface of the ground, plentifully lined with fine grasses, moss, grouse feathers, etc. *Eggs,* 3 or 4, greenish- or grayish-white, profusely and minutely dotted with olive-buff, greenish brown and lavender. A typical set from Labrador, as described by Major Bendire, measures .96 x .66 (24.9 x 16.8); .95 x .68 (24.1 x 17.3); .87 x .64 (22.1 x 16.3).

General Range.—Northeastern British America west to Hudson Bay and south to Newfoundland, Labrador, etc.; accidental in Greenland; in winter west to Manitoba and south to Illinois, Ohio, the Carolinas, etc.

Range in Ohio.—Common winter resident, especially in the northern part. Moves about in flocks in conjunction with *O. a. hoyti* and *O. a. praticola.*

HORNED LARK
Otocoris alpestris
4/5 Life-size

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THE Horned Lark bears the reputation of being the most plastic of American species—the Song Sparrow (*Melospiza cinerea*) alone competing with it in this respect. A recent monograph by Mr. Harry C. Oberholser[1] enumerates twenty-two forms, of which sixteen are described as North American, and five Mexican, beside one from Colombia and another (*O. a. flava*) from Eurasia. Of this number the majority occur west of the Mississippi River, where climatic conditions are more sharply differentiated, and where, especially in the southwest, the situation admits of that permanent residence which is almost essential to the marked development of subspecific forms. Doubtless other forms will be elaborated, and perhaps some of the distinctions here pointed out will prove inconstant, and the names proposed

Taken in Colorado. *Photo by E. R. Warren*

HORNED LARK—MALE[2]

untenable; but the fact remains that Mr. Oberholser has done a splendid piece of work, and one which serves to renew the fascination of the old problem of the influence of environment upon the origin of species.

There is much to be done in Ohio in accurately determining the mutual relations and the distribution of the three forms which occur here in winter. The problem is complicated by the large number of intermediate forms which are to be found. Indeed it is scarcely too much to say that no two Horned Larks look exactly alike. Typical specimens of each subspecies may be found during any season, but the majority of all birds taken will prove to be puzzling intergrades. The reason for this I conjecture to be as follows: *Otocoris alpestris* (or more properly, *O. alpestris alpestris*) attains its maximum

1 A Review of the Larks of the Genus Otocoris (Proceedings of U. S. Nat'l Museum, Vol XXIV.

2 This series of pictures taken by Mr. Warren in midwinter at Colorado Springs and represents *O. a. leucolaema* (Coues) or, possibly, *O. a. hoyti* Bishop. In either case the differences between them and our local species are too slight to be noticeable in a black and white reproduction.

development in the region east of Hudson Bay; *O. a. hoyti* in the region west; while *O. a. praticola,* normally centering in the northern prairie states bordering the Mississippi River, is rapidly extending its range to include the region north of the Great Lakes (as well as pushing east to the Atlantic Coast). It is evident, therefore, that the area south of Hudson Bay and north of Ohio

Taken in Colorado

Photo by E. R. Warren.

HORNED LARK—FEMALE.

affords a meeting ground for the three forms. It is the summer population of this extensive debatable ground which invades Ohio in winter, and floods us with intergrades. It is noteworthy in this connection that the Ohio breeding birds, typical *O. a. praticola,* so far as known, are largely lost to sight during the winter inundation from the north; and the question arises whether they do not retire southward as a whole or in part during the winter season.

No. 90.

HOYT HORNED LARK.

A. O. U. No. 474k. **Otocoris alpestris hoyti** Bishop.

Description.—Similar to *O. alpestris,* but the yellow of throat paler or restricted to central stripe; the eyebrow white or, rarely, slightly yellowish. Seasonal and sexual changes like preceding.

This seems to be a well marked subspecies. I have examined specimens from Columbus, Wauseon, Oberlin, etc., all clearly referable to this type.

This is the bird of the northern interior of British America. Its winter range overlaps that of *O. alpestris,* tho lying mostly to the westward. Large winter flocks often contain both forms in about equal proportions.

Average measurements of 15 males: wing 4.37 (111.1); tail 2.77 (70.5); exposed culmen .45 (11.4); tarsus .88 (22.3); middle toe .49 (12.5) (Oberholser).

Taken in Colorado.

Photo by E. R. Warren.

SIZING UP THE CAMERA.

No. 91.

PRAIRIE HORNED LARK.

A. O. U. No. 474b. **Otocoris alpestris praticola** Hensh.

Description.—Similar to preceding forms, but smaller and not so brightly colored; the forehead and line over eye dull white, the yellow of throat pale or wanting. Adult male, length about 7.25 (184.2); "wing 4.13 (104.9); tail 2.99 (75.9)." Adult female, "length 6.75-6.85 (171.5-174.); wing, average, 3.84 (97.5); tail 2.73 (71.9)" (Ridgway).

Recognition Marks.—Sparrow size; terrestrial; conspicuous black or blackish markings about head. Black crown patch produced into feather-tufts or "horns" pointing backward. Forehead and line over eye whitish, never yellow.

Nest, on the ground, a deep, cup-shaped depression plentifully lined with grass. Depth, 1.85; width, 2.12. *Eggs,* 3 or 4, pale greenish or bluish white to dull olive, heavy and evenly speckled with grayish or greenish brown. Av. size .82 x .62 (20.8 x 15.8).

General Range.—Upper Mississippi Valley and the region of the Great Lakes to New England, breeding eastward to western Massachusetts and even Maine; south in winter to Carolina, Texas, etc.

Range in Ohio.—Common in northern portion at all seasons; breeds sparingly southward at least as far as Columbus. Evidently increasing in numbers and distribution.

BEFORE the eyes have been opened to his singular beauties and charms the Prairie Horned Lark is apt to rank among the unthinking along with the "brown birds" of roadside and field. He is a modest bird in some respects, it is true. Watch him as he indulges in a dust bath in a warm country road, or as he is surprised from his gleaning in late autumn. He will run ahead with a plaintive cry as tho begging not to be disturbed or driven from his treat. If your business is urgent and you must follow the road, he finally leaves you with a louder cry of protest, either to fly to pastures new, or, as is more likely, to circle around and fall in behind you at the old spot. He is emphatically a bird of the open. He scorns trees and will not trust himself to anything whose connection with the ground is less obvious than that of a fence-post or, perchance, a fence-rail. When he is on the ground he walks or scampers, but does not hop like the Sparrow.

Two phases of this bird's life stand out most prominently to view, the winter flocking, and the early nesting. As winter approaches, these birds renounce allegiance to local ties and form roving bands, which flit from field to field or county to county, or else catch the fever of their more impetuous cousins from the North and join forces with them for a brief southern flight.

Perhaps the birds from northern Ohio are reinforced from Ontario and beyond. Those in central Ohio are augmented very considerably by northern visitors of both species.

A "feeding lot," or field where fodder is daily dealt out to the stock, is a typical resort for a winter troop of Horned Larks. Here they gather by dozens and scores, and sometimes to the number of two or three hundred, and feed upon the weed seed which the cattle have threshed out with their hooves, or upon the undigested matter of droppings. If the observer moves toward a flock in the open field the birds may skulk and steal away in every direction, or else, having taken plaintive counsel, take suddenly to wing and fly off in a great straggling company.

Taken in Colorado.

Photo by E. R. Warren.

A WINTER TROOP OF HORNED LARKS.

Once, during the winter of 1901-02, by the aid of a friendly rail fence and a convenient tree, I crept upon and studied closely a flock of two hundred Horned Larks (*alpestris, a. hoyti* and *a. praticola*). They were gleaning industriously near the edge of a large feeding lot a mile or so west of town. The mercury stood at zero, and the birds had need of industry to keep up the inner fires. Twice during my watch the entire flock was seized with a sense of instant danger and rose as one bird. After circling about once or twice they settled again, apparently reassured. I could not believe that I was the cause of offense, since they had already become somewhat ac-

customed to my presence, and I showed myself freely both before and after without causing alarm. Indeed, when I retired from the scene I passed right through their ranks and the birds simply melted away before me and quietly resumed their feeding at one side without any general disturbance. How then account for this sudden flight impulse? Some would suggest an unheard command from a sentinel. Such officials possibly exist, but their services are irregular and inconspicuous. On the whole I am inclined to give considerable weight to the suggestion of Dr. Thomson Jay Hudson that animals and birds in flock are moved by telepathic influences, emanating, as may chance, from one or another of their number. In this case, certainly,

"DEVOTES HIMSELF * * TO SOME MAKE-BELIEVE-RELUCTANT LADY."

the psychical explanation of the well known phenomenon appears plausible and attractive. The unreasoning apprehensiveness of a single individual—it might have been frightened at the shape of a cornstalk, or anything as trivial—was instantly communicated to the whole flock, and put them into sudden panic.

With the first signs of returning spring the Prairie Horned Lark abjures the madding crowd and devotes himself to the task of proving his superior merits and attractions to some make-believe-reluctant lady. The

Labrador birds, it may be, are still flocking; Bluebird has not brought the official tidings of spring from the Southland; but only let the February sun shine a little while and "Prairie's" brave courting song is heard from on high.

When the frost is out of the ground, altho there may still be ample danger of snows, the sturdy pair sink a deep, cup-shaped depression in the moist earth and line it plentifully with dried grasses, last year's thistle down, and such. In this latitude the eggs are laid in March or early April, three or four in number, heavily and oftenest minutely, dotted with dull olive or greenish brown, but sometimes bearing spots as large as those of Shrikes' eggs. The favorite way to locate Horned Larks' nests in season is to post one's self at the edge of a field and watch the female skulk to her nest. I

Photo by the Author.

"AT THE SACRED HOUR OF SUNSET."

have followed a bird with my glasses half way across a forty acre field until she was so far away that I could judge of her whereabouts only by the fact that movement had apparently ceased. As I walked straight toward the nest the bird would flush at forty or fifty yards,

A first brood is raised in April and a second in June or July. According to Prof. Lynds Jones three broods are raised in Iowa, one early in April, another early in June, and a third in late July, or August.

But the chief interest of nesting time centers in the song flight of the male. The song itself is perhaps nothing remarkable, a little ditty or succession of sprightly syllables which have no considerable resonance or modulation, altho they quite defy vocalization; yet such are the circumstances attending its delivery that it is set down by every one as "pleasing," while

for the initiated is possesses a charm which is quite unique. *Twidge-widge, widgity, widgy-widge,* conveys no idea of the tone-quality, indeed, but may serve to indicate the proportion and tempo of the common song; while *Twidge, widgity, eelooy, eelooy, idgity, eelooy, eew,* may serve the same purpose for the rare ecstasy song. The bird sometimes sings from a fence post, or even from a hummock on the ground, but usually the impulse of song takes him up into the free air. Here at almost any hour of the day he may be seen poising at various heights, like a miniature hawk, and sending down tender words of greeting and cheer to the little wife who broods below.

It is, however, at the sacred hour of sunset that the soul of the heavenly singer takes wing for its ethereal abode. The sun is just sinking; the faithful spouse has settled herself to her gentle task for the night; and the bird-man has lain down in the shadow of the fence to gaze at the sky. The bird gives himself to the buoyant influences of the trembling air and mounts aloft by easy gradations. As he rises he swings round in a wide, loose circle, singing softly the while. At the end of every little height he pauses and hovers and sends down the full voiced song. Up and up he goes, the song becoming tenderer, sweeter, more refined and subtly suggestive of all a bird may seek in the lofty blue. As he fades from the unaided sight I train my glasses on him and still witness the heavenward spirals. I lower the glasses. Ah! I have lost him now! Still there float down to us, the enraptured wife and me, those most ethereal strains, sublimated past all taint of earth, beatific, elysian. Ah! surely, we have lost him! He has gone to join the angels. "Chirriquita, on the nest, we have lost him." "Never fear," she answers; "Hark!" Stronger grows the dainty music once again. Stronger! Stronger! Dropping out of the boundless darkening blue, still by easy flights, a song for every step of Jacob's ladder, our messenger is coming down. But the ladder does not rest on earth. When about two hundred feet high the singer suddenly folds his wings and drops like a plummet to the ground. Within the last dozen feet he checks himself and lights gracefully near his nest. The bird-man steals softly away to dream of love and God, and to waken on the morrow of earth, refreshed.

It is most gratifying to note that the Horned Larks of our state are increasing. Perhaps some of the apparent increase is due to the fact of better acquaintance and closer methods of observation; but more is doubtless due to the continued denudation of timber and the consequent restoration of land to the prairie conditions suitable for this plains-loving bird. It is suggestive, in view of this suspected increase, that Nuttall, writing in 1832, said of this whole group (*O. alpestris* and subspecies not yet elaborated), "As yet the nest of this wandering species is unknown, and must probably be sought for

only in the coldest and most desolate of regions." Wheaton, writing from Columbus as late as 1882, knows nothing of the breeding of this bird in Ohio. He says, merely, "The Shore Lark breeds from New York and Wisconsin northward * * During the breeding season the male is said to have a short but pleasing song."

No. 92.

AMERICAN PIPIT.

A. O. U. No. 697. **Anthus pensilvanicus** (Lath.).

Synonyms.—American Titlark; Brown Lark.

Description.—*Adult in spring*: Above soft and dark grayish brown with an olive shade; feathers of crown and back with darker centers; wings and tail dusky with paler edging, the pale tips of coverts forming two indistinct bars; outer pair of tail-feathers extensively white; next pair white-tipped; superciliary line, eye-ring and under parts light grayish brown or buffy, the latter streaked with dusky except on middle of throat and lower belly,—heavily on sides of throat and across breast, narrowly on lower breast and sides. *Winter plumage*: Above, browner; below, duller buffy; more broadly streaked on breast. Length 6.00-7.00 (152.4-177.8); wing 3.37 (85.6); tail 2.53 (64.3); bill .46 (11.7).

Recognition Marks.—Sparrow size; brown above; buffy or brownish with dusky spots below; best known by *tlip-yip* notes repeated when rising from ground or flying overhead.

Nesting.—Does not breed in Ohio. *Nest,* on the ground, loosely constructed of grasses and moss. *Eggs,* 4-6, so heavily speckled and spotted with reddish or dark brown as almost entirely to obscure the whitish ground color. Often, except upon close examination, the effect is of a uniform chocolate-colored egg. Av. size, .77 x .57 (19.6 x 14.5).

General Range.—North America at large, breeding in the higher parts of the Rocky and Cascade Mountains and in sub-Arctic regions; wintering in the Gulf States, Mexico, and Central America. Accidental in Europe.

Range in Ohio.—Common during migrations. The spring movement is more rapid, and so less frequently observed than that of the fall.

THE American Pipit does not sustain the habitual dignity of the boreal breed. He is no clown, indeed, like our Titmouse, nor does he quite belong

to the awkward squad with young Cowbirds. A trim form and a natty suit often save him from well merited derision, but all close observers will agree that there is a screw loose in his make-up somewhere. The whole Pipit race seems to be struggling under a strange inhibitory spell, cast upon some ancestor, perhaps, by one knows not what art of nodding heather bells or potency of subtly distilled Arctic moonshine. As the flock comes straggling down from the northland they utter unceasing *yips* of mild astonishment and self-reproach at their apparent inability to decide what to do next. Their indecision is especially exasperating as one rides along a trail which is closely flanked by a primitive rail fence, as I have often done in northern Washington. One starts up ahead of you and thinks he will settle on the top rail and watch you go by. As his feet near the rail he decides he won't, after all, but that he will go a few feet farther before alighting. If he actually does alight he instantly tumbles off with a startled *yip,* as tho the rail were hot and he had burnt his toes. Then he tries a post with no better success, until you get disgusted with such silly vacillation and inane yipping, and clap spurs to your horse, resolved to escape the annoyance of having to follow such dubious fortunes.

In social flight the Pipits straggle out far apart, so as to allow plenty of room for their chronic St. Vitus's dance to jerk them hither or thither or up or down, without clashing with their fellows. Only a small percentage of those which annually traverse our state fly low enough to be readily seen; but when they do they are jolting along over the landscape and complaining at every other step. The note is best rendered *tlip-yip,* less accurately *pip-it* (whence of course the name); and a shower of these petulant sounds comes spattering down out of the sky when the birds themselves are nearly or quite invisible.

The birds rarely appear singly, but move commonly in loose companies of from ten to a hundred individuals. The fall movement is quite leisurely, and not infrequently snow flies before the last stragglers are safely past. At this time of year they are to be found, if at all, in close-cropped pastures, fallow fields, or upon the gravelly shores of rivers and ponds. In spring the return movement is much more definite and concentrated. The main body of migrants passes through about the second week in May, altho stragglers in winter plumage occur casually in March and April. The bird is reported by Ridgway as an occasional winter resident in southern Illinois, and it could probably be found at that season in the southern part of this state.

Spring flocks may be looked for in freshly plowed fields, where they feed attentively and often silently, moving about with "graceful gliding walk, tilting the body and wagging the tail at each step, much in the manner of a *Sciurus.*"

No. 93.

WOOD THRUSH.

A. O. U. No. 755. **Hylocichla mustelina** (Gmel.).

Description.—*Adult*: Above, bright cinnamon-brown, brightest on head and nape, shading insensibly into light olive-brown on rump, wings, and tail; wing-quills fuscous on inner webs; below, white, a buffy tinge on breast meeting bright cinnamon on sides of neck,—marked, except on upper throat, belly, and crissum, with large, roundish, or wedge-shaped, blackish spots; lores and eye-ring whitish, not clearly defined; auriculars sharply streaked with white and

Taken near Circleville. *Photo by the Author.*

"The Brooding Female is Unusually Devoted to Her Eggs."

dark brown; bill dark at base, lightening toward tip on culmen; lower mandible and feet yellowish brown. Length 7.50-8.50 (190.5-215.9); wing 4.30 (109.2); tail 3.10 (78.7); bill .66 (16.8).

Recognition Marks.—Chewink size; the largest of the genus; above cinnamon-brown in front, olive-brown behind; below heavily spotted.

Nest, of twigs, weed-stalks, leaves, and trash, with a matrix, or inner wall, of mud, carefully lined with rootlets; usually saddled upon semi-horizontal branch of sapling, five to fifteen feet up. *Eggs,* 3-5, uniform greenish blue, about

Take near Circleville. "THE DEPTHS OF THE FOREST CLAIM HIM." *Photo by the Author.*

the color of Robin's, or perhaps averaging a shade lighter. Av. size, 1.04 x .76 (26.4 x 19.3).

General Range.—Eastern United States to the Plains, north to southern Michigan, Ontario, and Massachusetts; south in winter to Guatemala and Cuba. Breeds from Virginia, Kentucky and Kansas northward.

Range in Ohio.—Common summer resident.

NEST AND EGGS OF THE WOOD THRUSH.

THE EGGS ARE REALLY MUCH DARKER THAN THEY APPEAR TO BE BECAUSE BLUE "TAKES WHITE".

ALTHO all of our Thrushes are retiring in disposition, the Wood Thrush, perhaps because of his larger size, is the least so. The depths of the forest, indeed, claim him, but so too do the shaded lawns of village streets and city parks. In his woodland home this Thrush does not flee as tho a price

had been set upon his head, but often comes forward—not too close—with a *pit* of inquiry and greeting.

The Wood Thrush spends considerable time on the ground looking for beetles and worms, but he is ready at a moment's notice to flutter up on a log or low branch, and stand there surveying you, flirting, or twinkling, the wings occasionally to indicate his perfect readiness for further retreat, or else ruffling and shaking his feathers as tho to shake off the memory of the mold. A false step now and he may disappear irrevocably down some forest isle; a quiet glance of admiration serves to reassure him, and he may resume his feeding.

Taken near Circleville.

Photo by the Author.

ONE TYPE OF NEST.

THIS NEST APPEARS NEAR THE CENTER OF THE ILLUSTRATION ON PAGE 210.

There is an air of gentleness and good breeding about the bird, which goes a long way to disarm a wanton enemy, and one studiously hostile there could not be. Brighter than the other Thrushes in color, and marked unmistakably with heavy spots upon breast and sides, the Wood Thrush is further distinguished in a gifted family by its wonderful voice. The chanting of the Wood Thrush is one of the choice things in bird music. In the freshness of the undried morning the bird mounts a low limb and takes up a part in the grand anthem of nature, whose complementary voices may be lost to any ear less fine than his. The bird listens to the retreating foot-steps of the morning stars, and sings, *"Far away—far away."* Zephyr stirs the unfolding leaves with his boyish alto and our matchless tenor responds, *"Come to me—Here in glee—bide a wee,"* in cadences of surpassing sweetness. Altho the singer's voice is rich and strong, so that he may be heard at times for half a mile, there are at the same time grace notes and finer passages which only a near-by listener can catch. The notes, I am told by musical critics, are, of all bird notes, the most nearly reducible to ordinary musical notation; but the peculiar timbre of the bird's voice, the rich vibrant quality of the tones, is of course inimitable. Their utterance at morning and evening is something more than a clever musical performance; it is worship.

The typical situation for a nest is upon an overarching sapling, as shown in the nearest illustration. To secure a romantic site stability is sometimes sacrificed, and the nest, loosely saddled upon a narrow branch, may be toppled over by the wind or by a careless hand. At other times the nest is securely lodged upon the forks of a horizontal limb or upright sapling, and may prove very durable.

Taken near Circleville. *Photo by the Author.*

A TYPICAL NESTING SITE.

Upon a foundation of dry leaves are laid grass, fibres, and weed-stems; these are held in place by a matrix of mud or rotton wood, and the nest lined with rootlets or dead leaves. The mud-working must be disagreeable business for such dainty birds. I once came upon a mother mason at her task. Her bill and breast were all bedaubed with mud, and she cut such a sorry figure that she fled precipitately upon my approach and would not come back again.

According to Dr. Jones the same nest is occupied during successive seasons, especially if securely placed. Repairs are made each year, and consist either of a new matrix and lining or of the latter alone. He has one in his collection which shows four distinct yearly additions.

The brooding female is unusually devoted to her eggs, and altho in manifest terror of the "infernal machine" thrust up close to her nest, bravely returns to her charge again and again.

No. 94.

WILSON THRUSH.

A. O. U. No. 756. **Hylocichla fuscescens** (Steph.).

Synonym.—VEERY.

Description.—*Adult*: Above, light cinnamon-brown or bister, uniform; wing-quills shading to brownish fuscous on inner webs; below white, the throat, except in the upper middle, and the breast, tinged with cream-buff, and spotted narrowly and sparingly with wedge-shaped marks of the color of the back; sides and flanks more or less tinged with brownish gray; sides of head buffy-tinged, with mixed brown, save on whitish lores; bill dark above, light below; feet light brown. Adult male, length 7.25-7.75 (184.2-196.9); wing 4.00 (101.6); tail 2.87 (72.9); bill .53 (13.5). Female averaging smaller.

Recognition Marks.—Sparrow to Chewink size; light cinnamon brown above; breast buffy, *lightly* spotted.

Nest, of leaves, bark-strips, weed-stems, and trash, lined with rootlets; on or near the ground. *Eggs,* 3-5, plain greenish blue, not unlike the Robin's. Av. size, .88 x .64 (22.4 x 16.3).

General Range.—Eastern United States to the Plains, north to Manitoba, Ontario, and Newfoundland. Breeds from northern New Jersey and the northern part of the Lake States northward; winters sparingly in Florida, but chiefly south of the United States.

Range in Ohio.—Common migrant. Not uncommon summer resident in northern Ohio; less common and locally restricted throughout the state.

THOSE of this species which pass farther north to breed, and which constitute by far the greater majority, may sometimes be seen in village orchards and in rather open situations, but the chosen home is in deep, dank forests and in low-lying, swampy tangles. Here the enthusiastic bird student may catch a sufficient glimpse of a flitting shade to believe that the tail seen does not contrast in color with the back, and that the bird must therefore be, by elimination, the Wilson rather than the Hermit Thrush. For the rest the bird is known only as a voice, an elusive voice, a weird and wonderful voice. The name "Veery," by which the bird is known in New England, is evidently an imitation of one of its rolling notes. Its scolding or interrogatory cry consists of a single one of these notes, *Ve-ery* or *ve-er-u*, but its song consists of a series of six or seven of these syllables rolled out with a rich and inimitable brogue. The notes vibrate and resound, and fill the air so full of music that one is led to suspect the multiple character of each. The bird is really striking chords, and the sounding strings still vibrate when the next is struck. There is, moreover, in the whole performance a musical crescendo coupled with a successive lowering of pitch, which is simply ravishing in its sense of mystery and power.

Altho reported commonly in the northern portion in summer, I have no positive information of a nest's having been found in Ohio. In fact this species is one of the inexcusably neglected birds of the state.

No. 95.

GRAY-CHEEKED THRUSH.

A. O. U. No. 757. **Hylocichla aliciæ** (Baird).

Synonym.—ALICE'S THRUSH.

Description.—*Adult*: Above, uniform dull olive-brown; below, white, on the breast and sides of throat tinged with pinkish buff, and further marked by broad, sector-shaped spots of blackish; the sides and sometimes lower breast washed with dusky gray; lores and region about angle of commissure distinctly gray; remaining space on side of head gray, mingled with olive-brown. Bill dark brown, somewhat lighter below; feet brown. Length 7.00-8.00 (177.8-203.2); av. of six Columbus specimens; wing 4.05 (102.9); tail 2.56 (65.); bill .50 (12.7).

Recognition Marks.—Sparrow to Chewink size; pallid cheeks afford only positive diagnostic mark; darker above and more heavily marked on breast than *H. fuscescens.*

Nesting.—Does not breed in Ohio. *Nest,* of bark-strips, leaves, grasses, etc., lined with fine grasses; on branches of low trees or on bushes, two to eight feet from ground. *Eggs,* 4, greenish blue, faintly spotted with reddish or yellowish brown. Av. size, .91 x .70 (23.1 x 17.8).

General Range.—Eastern North America west to the Plains, Alaska and northern Siberia; north to the Arctic Coast; south in winter to Costa Rica. Breeds chiefly north of the United States.

Range in Ohio.—Not very common spring and fall migrant.

ALL Thrushes look alike to the layman, and it is not perhaps to be wondered at that this species, altho by no means rare, is not known to above a dozen observers in the state. Alice's Thrush has the same modest ways and semi-terrestrial habits which characterize the other members of the genus, and while with us does little to distinguish itself from them. Like the others it has a fashion of slipping along quietly through the undergrowth, and may not be observed until driven, all unconsciously perhaps, to its last ditch, whereupon it flutters up into view on a post of the boundary fence, or hurtles back wildly over the observer's head. It is, perhaps, a little more deliberate in movement than the Olive-backed Thrush, with which it is most likely to be confounded.

During the migrations the bird is seldom heard to utter a sound. Its scolding note is described as being midway between the interrogatory whistle of the Olive-backed and the ill-mannered snarl of the Wilson. Its song, too, requires careful distinction from the former, and hence from both.

The breeding habits of the Alice Thrush are as yet imperfectly known, especially in its British American range. Mr. Bradford Torrey first suspected its presence in New England during the breeding season, on the strength of a song heard in the White Mountains, and shortly afterward Mr. William Brewster confirmed the record by securing nests in the same locality.

No. 96.

OLIVE-BACKED THRUSH.

A. O. U. No. 758a. **Hylocichla ustulata swainsonii** (Cab.).

Description.—*Adult*: Above, olive, or olive-brown, substantially uniform,—a little brighter than in preceding species; below, white; throat (only slightly in center), breast, and sides of head strongly suffused with creamy or ochraceous-buff, unmistakable on lores and eye-ring; cheeks and throat spotted narrowly and breast broadly with dusky olivaceous; sides and flanks lightly washed with brownish gray, sometimes appearing in broad, sector-shaped marks on sides and across breast below the buffy area. Bill brown, lighter at base of lower mandible; feet light brown. Length 6.50-7.50 (165.1-190.5); wing 3.81 (96.8); tail 2.49 (63.2); bill .50 (12.7).

Recognition Marks.—Sparrow size; uniform olive-brown above; heavy spotting and buffy wash on breast; sides of head and eye-ring buffy.

Nesting.—Does not breed in Ohio. *Nest,* of bark-strips and grasses with a heavy inner mat of leaves, sometimes largely composed of, or covered externally with, moss, lined with rootlets and fine grasses; placed at moderate heights in bushes or saplings of thickets. *Eggs,* 3-5, pale greenish olive, with not very distinct spots and blotches of reddish and yellowish brown. Av. size, .91 x .65 (23.1 x 16.5).

General Range.—Eastern United States westward to the Upper Columbia River, and casually to the north Pacific Coast. Southward in winter to Cuba, Central America, and western South America; casual in Bermuda. Breeds in the mountainous regions of the Eastern States northerly, and generally north of the United States.

Range in Ohio.—A common but very unobtrusive migrant.

ALTHO not less habitually a bird of the undergrowth and thickets than its congeners, when at home in its northern haunts, the Olive-backed Thrush has a curious custom during migrations of remaining aloft in the

OLIVE-BACKED THRUSH
Hylocichla ustulata swainsonii
⅔ Life-size

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tree-tops and spending the days in company with the Warblers. Sometimes in searching the top of an elm tree with my glasses for possible Parulas and certain Black-throated Greens, I have noted a half dozen of these Thrushes, moving about quietly at that height and evidently finding an abundance of insect food about the new-flung tassels of clustering flowers. Here too are to be heard subdued songs, which, because of their very moderation, serve to transport the fortunate hearer into regions of utter rest.

When it does resort to the ground, the Olive-backed Thrush can be provokingly elusive; and no one of the servants of this wayside inn, Ohio, may claim really to know this fleeting guest. The full-voiced song is often rendered in dense thickets and swampy woods, especially in the northern part of the state. It bears a superficial resemblance to that of the Wilson Thrush and has something of the same rolling, vibrant quality. It is, however, less prolonged and less vehement. It lacks the liquid r's and l's which the Veery rolls under his tongue like sweet morsels; and the pitch of the whole rises slightly, while the volume of sound diminishes toward the end of the series, *We-e-o we-e-o we-o we-o weee.* The scolding note is a soft liquid *quit,* which may be perfectly imitated by whistling; but this sound I have never heard during the migrations. There is, besides, a high-pitched, musical call-note, which may be recognized as the birds pass overhead at night.

No. 97.

HERMIT THRUSH.

A. O. U. No. 759b. **Hylocichla guttata pallasii** (Cab.).

Description.—*Adult*: Above, light olive- or dull cinnamon-brown, changing on rump to bright cinnamon of lower tail-coverts and tail, in marked contrast to back; below, white, clear only on belly,—throat and breast with a faint buffy tinge; sides and breast washed with pale brownish; throat, in confluent chains on sides, and breast, broadly marked with dusky olivaceous spots, paling or obscure on lower breast and sides; sides of head not peculiar; bill dark brown, with lighter base on lower manaible; feet light brown, Length 6.50-7.50 (165.1-190.5); wing 3.60 (91.4); tail 2.60 (66.); bill .51 (13.).

Recognition Marks.—Sparrow size; cinnamon tail contrasting with back, distinctive.

Nesting.—Not positively known to breed in Ohio. "*Nest,* of moss, coarse grasses, and leaves, lined with rootlets and pine-needles, on the ground. *Eggs,* 3 or 4, greenish blue, of a slightly lighter tint than those of the Wood Thrush, .88 x .69 (22.4 x 17.5)" (Chapman).

General Range.—Eastern North America, breeding from the northern Alleghanies, the mountainous parts of southern New England, southern New York, northern Michigan, etc., northward, and wintering from the Northern States southward.

Range in Ohio.—Abundant migrant. One breeding record, Cincinnati, by Chas. Dury.

AS one passes through the woods in middle April, while the trees are still leafless and the forest floor brown with last fall's harvest, a moving shape, a little browner still but scarcely outlined in the uncertain light, starts up from the ground with a low *chuck,* and pauses for a moment on a tiny stump. Before you have fairly made out definite characters the bird flits to a branch a little higher up and more removed, to stand motionless for a minute or so, or else to chuckle softly with each twinkle of the ready wings. By following quietly one may put the bird to a dozen short flights without once driving it out of range; and he may find that the tail is abruptly rufous in contrast with the olive-brown of the back, and that the breast is boldly spotted, but not so heavily as in the case of the Wood Thrush.

The Hermit Thrush is very common, almost abundant, along wooded streams and low-lying copses, from the middle of April to the fifth of May. The remarkable weather in the spring of 1903 brought one bird to Columbus on the nineteenth of March, and held the species at Oberlin until the eighth of May. Altho rather retiring and quite clever at escaping observation when desiring to, the birds are frequently seen in the back yard shrubbery, and share with Towhee and Cardinal the spoils hidden beneath the carpet of fallen raspberry leaves. In the fall they are not less abundant and linger as late as November 25th.

Now and then a fortunate observer, lurking about in some secluded glen, catches a song—some foregleam of the glory which is one day to light up the hills of Laurentia. I have never heard it myself except in the mountains of Washington. For me the vicinity of a certain emerald stream, which passes, half pool, half spray, through the solemn woods which clothe Wright's Peak, is forever sacred, because there, with a dear companion, I first heard the vesper hymn of the Hermit Thrush. We did not see the singer—that were sacrilege—but from some dim height there floated down to us a voice no longer tainted by the earth struggle, but heavenly pure, serene, exalted. It was the voice of an angel, such as haunt the groves of Paradise. To recall but for an instant those ravishing notes is to call up the first promise of love, the mother's prayers, and all the precious contents of that inner casket of the heart, which may not be opened until we present ourselves at Heaven's gate, and feel therein for the golden key.

No. 98.

AMERICAN ROBIN.

A. O. U. No. 761. **Merula migratoria** (Linn.).

Description.—*Adult male*: Head black, interrupted by white of chin and white with black stripes of throat; eyelids and a supraloral spot white; tail blackish with white terminal spots on inner webs of outer pair of rectrices; wings dusky except on external edges; remaining upper parts grayish slate; below,—breast, sides, upper belly and lining of wings cinnamon-rufous; lower belly and crissum white, touched irregularly with slate; bill yellow with blackish tip; feet blackish with yellowish soles. *Adult female*: Similar to male, but duller; black of head veiled by brownish. *Adults in winter*: Upper parts tinged with brown, the rufous feathers, especially on belly, with white skirtings. *Immature*: Similar to adult, but head about the color of back; rufous of under parts paler or more ochraceous. *Very young birds* are black spotted, above and below. Length about 10.00 (254.); wing 5.08 (129.); tail 3.75 (95.3); bill .78 (19.8).

Recognition Marks.—"Robin" size; cinnamon-rufous breast; everybody knows the Robin.

Nest, a thick-walled but shapely bowl of mud, set about with twigs, leaves, string, and trash, and lined with fine grass-stems; placed anywhere in trees or variously, but usually at moderate heights. *Eggs,* 4 or 5, sometimes 6, greenish blue, unmarked. Av. size, 1.15 x .79 (29.2 x 20.1).

General Range.—Eastern United States to the Rocky Mountains, including Mexico and Alaska. Breeds from Virginia and Kansas northward to the Arctic Coast. Winters from southern Canada and the Northern States (irregularly) southward. Casual in Bermuda. Accidental in Europe.

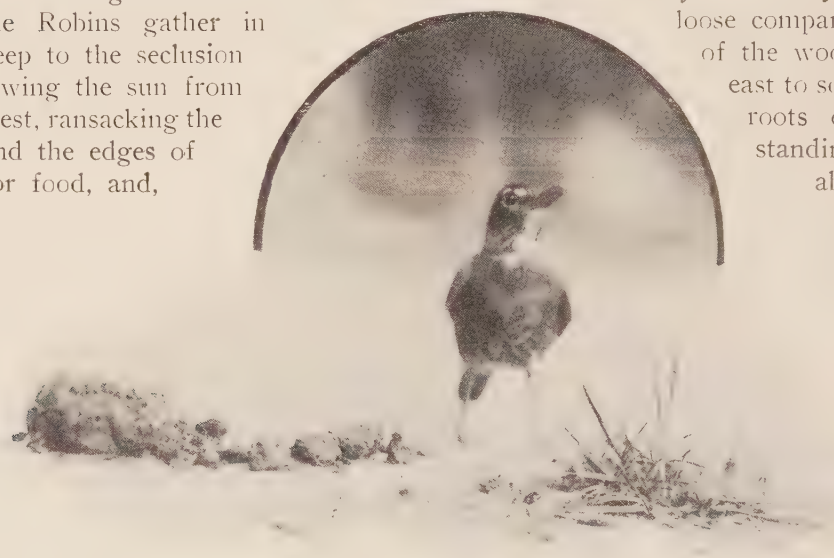
Range in Ohio.—Abundant summer resident. Casual during winter throughout the state.

MANY birds bear the epithet American to distinguish them from similar old world species, but none bear it more worthily nor more proudly than the American Robin. Having only a superficial resemblance to the English Redbreast or "Robin Redbreast" (*Erithacus rubecula*), from which it was originally named, our sturdy bird is an unmistakable "bird o' freedom," and as such is beloved from Boston Bay to the Golden Gate, and from the Gulf to the Forty-ninth parallel—and beyond. With Bluebird alone does Robin divide the honors of early spring, and it is nip and tuck between these friendly rivals which shall first proclaim the glad tidings of winter's downfall.

Sometime in February the first migrant Robins usually pass our southern border, and press on with squeeches and pipings of delight to reclaim possession of the old haunts. It is not quite clear whether the first migrants are those which pass furthest north, or whether the birds move up by successive waves, each wave outstripping its predecessor and sweeping over the heads of the

birds already located; but the latter is, I believe, usually the case. Or again we may conceive that the thirsty land drinks up each succeeding wave until its force is dissipated, or until the saturation point is reached, after which those which follow may pass on without loss, save of the lame and the lazy. Certain it is that the local population is everywhere augmented during March, and that great straggling fleets, composed of several hundred individuals, pass over our heads as late as the first week in April.

During the uncertain days of early spring the Robins gather in loose companies and keep to the seclusion of the woods, following the sun from east to south and west, ransacking the roots of trees and the edges of standing water for food, and, above all,



Taken near Oberlin. *Photo by the Author.*

GOOD MORNING! HAVE YOU ANY WORMS FOR ME?

sketching in the matrimonial plans of the season. When Robins have become common about the streets and yards of village and town, partners have usually been selected, but there still remain for many of the cocks hard-contested battles before peaceful possession is assured. These are not sham fights either; a Robin will fight a hated rival, beak and claw, till he is either thoroughly winded or killed outright.

After the first brood is raised the males assemble nightly with the full-grown young in chosen roosts, while the females are undertaking the duties of a second brood. These roosts are selected either in village shade trees or in thickets and rank vegetation of low-lying swampy land. Curiously enough they often share a bit of grove with the Bronzed Grackles, or else mix in freely with the Redwings in the cat-tail swamps. During July and August few birds are to be seen in their breeding haunts, but except for a

Taken in Canal Cover. *Photo by the Author.*

DINNER TIME.

few belated couples, unfortunate with the early nesting or busy with a third brood, they gather in little companies and feed largely upon wild fruits, on wooded hillsides or in quiet out-of-the-way places. At this season, too, the birds are undergoing the moult, and are indisposed for any considerable activity.

The Robin's song in its common form is too well known to require particular description, and too truly music to lend itself well to syllabic imitation. It is a common thing, indeed, like the upturned mold and the air which fans it, but out of these come the varied greens which beautify the world; and the homely piping of the Robin has given birth to many a heaven-directed aspiration and purged many a soul of guilty intent. Robin conceives many passages which are too high for him, and these he hums inaudibly or follows in silent thought, like a tenor with a cold; when the theme reaches his compass again he resumes, not where he left off, but at the end of the unheard passage. When the Robin is much given to half-whispered notes and strains unusually tender, one may suspect the near presence of his *fiancee*. If you are willing to waive the proprieties for a few moments you will hear low murmurs of affection and soft blandishments, which it would tax the art of a Crockett to reproduce. And again, nothing can exceed the

sadness of a Robin's lament over a lost mate. All the virtues of the deceased are set forth in a coronach of surpassing woe, and the widower declares himself forever comfortless. It is not well, of course, to inquire too particularly as to the duration of this bereaved state—we are all human.

As Dr. Wheaton has already pointed out, the Robin occasionally develops surprising powers of mimicry. I once found one in early spring who

Taken in Canal Dover. *Photo by the Author.*

ALL FED.

called his mate "Phoebe" with such a convincing accent that I spent a half hour searching for the flycatcher. Another which sang back of Orton Hall on the O. S. U. campus had incorporated the familiar ringing vesper notes of the Wood Thrush into its own song. He gave the borrowed notes in three keys or qualities, all of which were essentially characteristic of the other bird.

In nesting the Robin displays little caution, and its homely mud-walled

cup is not withdrawn from most familiar observation. Building preferably in the major crotches of orchard or shade trees, the bird ordinarily selects a site from five to fifteen feet up, but nests are sometimes found at fifty feet, and again, on the ground. Window sills and beams of porches, barns, and outbuildings are favorite places, and especially if the season is backward. Two of the most unusual sites came under my observation during the season of 1903. One shown in the illustration was placed on the sleeper of a railroad

Taken in Lorain County. *Photo by the Author.*

AN UNUSUAL NESTING SITE.

bridge over which trains passed three times an hour. Another was made fast among the drooping branches of a weeping willow near their tips, and at a point where none of them were above a quarter of an inch in diameter. How the bird contrived to lodge the foundation, and mould her characteristic mud-cup in such a difficult situation, I cannot comprehend.

Nothing could be more common than Robins' nests. In walking out from Canal Dover, along the tow-path which Garfield's footprints have made sacred, the writer, in company with Dr. Leander S. Keyser, counted

seventeen occupied nests of the Robin in the trees which were within reach of the path, and in a distance of a mile and a half. The stretch would deserve to be called Robin Row if there were not so many other places likewise distinguished.

Taken near Canal Dover. *Photo by the Author.*
THE TOW-PATH.

On this same trip Dr. Keyser conducted me to a Robin's nest which he had located some days before in an osage-orange hedge, and which he thought might be convenient to photograph. The mother bird was at the nest, but alas! how helpless! During some excitement or sudden fright the bird had become impaled on one of the thorns of an overarching branch and had struggled in vain, until death—all too tardy, I fear—had put an

Taken near Canal Dover. *Photo by the Author.*
A ROBIN TRAGEDY.

end to her misery. The cruel spike was thrust through the skin and underlying connective tissue of the throat in a horizontally ascending direction, and the bird was hanged with her feet dangling in her own nest. One egg, entire but stained with ordure, and a sodden mass of broken eggs besides, bore witness with sad eloquence to the tragedy.

In spite of the law-makers, who knew exactly what they were doing in declaring the Robin worthy of protection, thousands of these birds are annually slaughtered by unthinking people because of their fondness for cherries and other small fruits. And yet we are assured by competent authorities that cultivated fruit forms only four per cent of the Robin's food throughout the year, while injurious insects constitute more than one-third.[1] Robins *are* provoking in the cherry trees, especially when they bring the whole family and camp out; but there is one way to limit their depredations without destroying these most distinguished helpers: plant a row of mulberry trees, preferably the Russian Mulberry, along the orchard fence, and the birds will seek no further. I have seen a mulberry tree swarming with Robins, while neighboring fruit trees were almost untouched. The plan is simple, humane, and efficacious.

1 Butler: Birds of Indiana, p. 1160.

No. 99.

BLUEBIRD.

A. O. U. No. 766. **Sialia sialis** (Linn.).

Synonyms.—EASTERN BLUEBIRD; WILSON'S BLUEBIRD.

Description.—*Adult male, in spring*: Above rich azure-blue; below, throat, breast, and sides chestnut. Occasionally the azure area reaches around to include the chin. In autumn the blue of the upper parts is obscured by the reddish-brown edgings of the feathers; the white of the lower parts is more extended and the chestnut paler and more restricted. *Adult female*: Above, blue mixed and obscured with dull chestnut, except on wings, tail and rump, which are pure; below, paler. *Immature*: Brownish, with blue gradually increasing; back marked with whitish shaft lines; breast and under parts closely dotted with brown and white. Length 5.70-7.00 (144.8-177.8); wing 3.75-4.15 (95.3-105.4); tail, 2.60-3.00 (66.-76.2); bill .45 (11.4). Female averages smaller than male.

Recognition Marks.—Sparrow size; azure-blue and chestnut coloring.

Nest, in cavities, artificial or natural, hollow trees, stumps, posts, bird boxes, etc.; lined with grass and weed-stalks, with occasionally string, feathers, and the like. *Eggs*, 4-6, uniform pale blue, sometimes very light bluish white, and rarely pure white. Average size, .84 x .63. (21.3 x 16.).

General Range.—Eastern United States to the eastern base of the Rocky Mountains, north to Manitoba, Ontario and Nova Scotia, south in winter from the Middle States to the Gulf States and Cuba. Bermuda, resident.

Range in Ohio.—Of universal distribution in the State, but most abundant in northern and central portions. In winter it remains regularly only in the extreme south, but stragglers may be found anywhere.

HOW the waiting country-side thrills with joy when Bluebird brings us the first word of returning spring. The snow may still linger in patches and the hoar-frost be only just making out of sight that rare day when the herald presses northward and scatters the tidings far and wide. Spring is in the air and spring, thenceforth, is in our hearts. The cruel north wind may sweep down again and all the ugly signs of winter return, but Bluebird has kindled in our hearts the fires of an inextinguishable confidence, and we know that the master word of exorcism has been spoken. Surely there is nothing in nature more heartening than the resolute courage and sublime good cheer of this dauntless bird. Reflecting heaven from his back and the ground from his breast, he floats between sky and earth like the winged voice of Hope. Or else, "shifting his light load of song from post to post along the cheerless fence," he pours out sincerest gratitude for even the meager goods of life, and counts it joy enough to live.

Truth to tell, Bluebird does make sad mistakes sometimes. He trusts too

BLUEBIRD
Sialia sialis
Life-size

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well some tricky Zephyr of the South, who whispers not of what he knows, but what he hopes, and is cruelly deceived. But Spring does come, and if her most impetuous herald dies in the performance of his duty, we love and honor him most because his task was hardest.

Taken in Knox County. *Photo by J. B. Parker*

FEMALE BLUEBIRD ABOUT TO ENTER NEST.
NOTE THE WOODPECKER-LIKE ATTITUDE AND ESPECIALLY THE USE OF THE TAIL AS A PROP.

The year 1895 marked a sad chapter in Bluebird's experience, and proved to be a turning point in the history of his race. That spring an unusually severe cold wave of long duration swept over the Middle and Gulf States. The cold wrought fearful havoc to all bird life, but the blow seemed to fall most heavily upon the Bluebirds. Their ranks were not merely decimated; they were almost exterminated. Observers in Ohio saw only single birds where before they had seen scores and hundreds. Thus, at Oberlin, I saw only five birds up to May 1, 1895. It is very gratifying, however, to note that their numbers are materially increasing of late. In some localities they appear to have almost regained their former status.

It goes without saying that from that dreadful winter only the fittest survived. Evidence is not lacking to show that the Bluebird of today is hardier than the Bluebird of ten years ago. In Lorain County for instance, there were no authentic records of Bluebirds wintering until the season of '98-'99. Then and every season since a few have been seen. If this be a correct inference, then the massacre of '95 will not have been without its influence for good in preparing the species against similar and more severe attacks in the future.

The Bluebird is pre-eminently domestic in his tastes, and he lacks none of the qualities essential to the model husband and father. If not already mated upon arrival in early spring, the business is not long delayed. The birds take a leisurely honeymoon, and the first nesting is not undertaken before the last week in April or the first in May. Nothing can exceed the gallantry, or perhaps I would better say the courtesy of Bluebirds *en famille*. They almost

invariably address each other as *dear* or *dearie,* and they have a host of untranslatable tones of endearment beside.

These gentle spirits are, however, best not aroused by an outsider. In securing his personal rights or in defending his home, Bluebird is always brave and sometimes pugnacious to a degree. Indeed it is to be feared that when it comes to a question of property rights, he is not always kind. The annals of bird-lore are full of accounts of spirited encounters between luckless Wrens, Martins, Woodpeckers, etc., and Bluebird. Here is one of them by Dr. Howard Jones, of Circleville: "Some years ago I placed a bird box upon the house-top, which for a few seasons was occupied by a pair of Bluebirds. One spring they failed to appear at the usual time and the box was taken by a pair of Martins. The old nest was carried out and the newcomers were thoroughly settled in their quarters, when the Bluebirds returned (probably the same pair that had formerly occupied the box), and at once commenced tearing out the intruders' nest. But they were soon discovered and a pitched battle ensued, the Bluebirds retiring as if defeated. This procedure was repeated several mornings and at intervals during the days. When, early one morning, being awakened by the incessant screams of the Martins, I hastened to the yard to see what I supposed was the final encounter; but the affray was over before I arrived. My father, however, was there holding a female Martin in his hand, he having witnessed the whole affair. After much scolding and sparring one of the Bluebirds clinched with the Martin, and both birds rolled together from the house-top to the pavement below, where, in deadly embrace, they were captured; but the Bluebird, still strong and active, slipped away. In

Photo by Rev. W. F. Henninger.

A DOUBLE NEST OF THE BLUEBIRD.

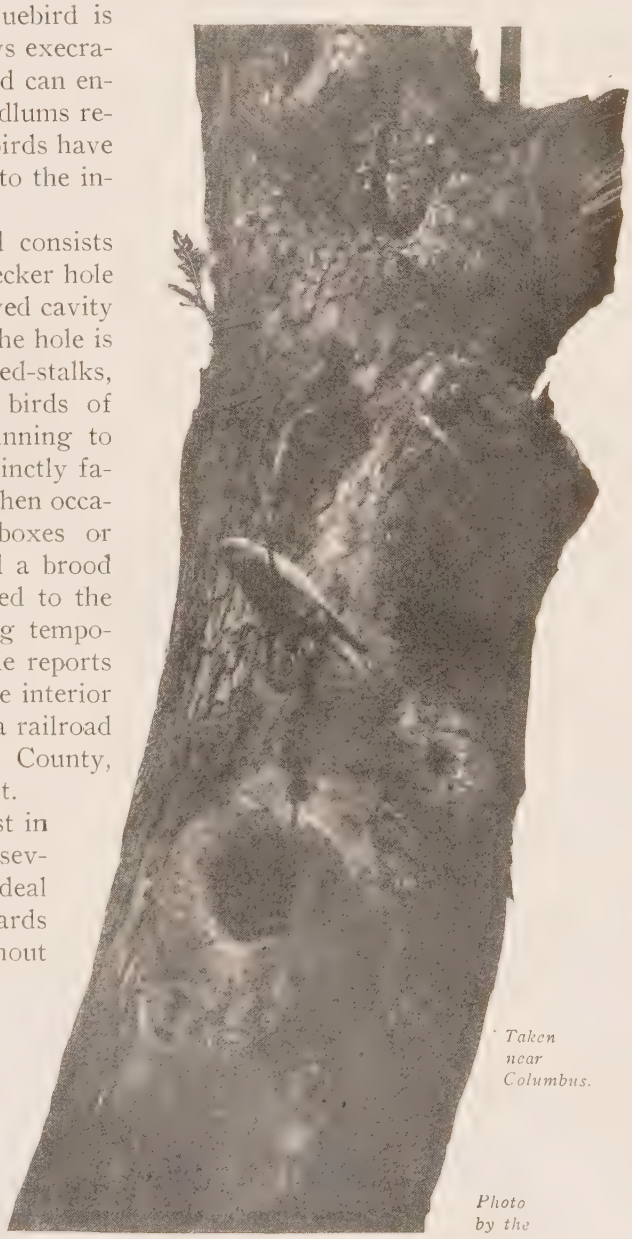
THE LOWER SET WAS LAID PREMATURELY, OR ELSE CHILLED BY A COLD SNAP.

all these engagements the male Martin seemed content to encourage his mate by his vociferous screams, while both Bluebirds fought with equal vigor."

In a fair encounter the Bluebird is more than a match for the always execrable English Sparrow; but no bird can endure the mobbing which the hoodlums resort to; and as a result the Bluebirds have to surrender the choicest places to the interlopers.

The home of the Bluebird consists ordinarily of a deserted Woodpecker hole in tree or stub, or else of a decayed cavity in post, stump, or apple tree. The hole is plentifully lined with grass, weed-stalks, and unclassifiable trash; altho birds of more cultivated tastes are beginning to employ feathers. The birds distinctly favor the haunts of men, and so, when occasion offers, will occupy bird-boxes or suitable crannies. I once found a brood in a half open mail-box, attached to the front door of a village dwelling temporarily vacant. Mr. Oliver Davie reports finding a nest in Columbus in the interior of a car-wheel rendered idle by a railroad strike; and another in Morrow County, in a deserted Eave Swallow's nest.

A farm near North Amherst in Lorain County contains, besides several fields and pastures and an ideal bit of woodland, two young orchards and a small vineyard. Throughout these last, Mr. Will Smithkons, the son of the owner, has distributed upwards of fifty Bluebird boxes, each composed of a section of a hollow limb, closed with a board at top and bottom, and provided with a neat augur-hole in the side. The boxes are made fast to the trees or lodged at considerable intervals along the intersecting fences



Taken near Columbus.

Photo by the Author.

BLUEBIRDS AT NEST.
THE LOWER KNOT-HOLE CONTAINS A BROOD OF CLAMORING YOUNG.

Mr. Smithkons finds that more than half of the boxes are occupied each season; and he counts the birds of inestimable advantage in helping to save the grapes and apples from the ravages of worms. In two instances Robins accepted the partial shelter afforded by the boxes and nested in the crotch of the tree immediately under the Bluebirds.

The eggs, from four to six in number, are a uniform pale blue, with a surface somewhat polished. Owing to the delicacy of the pigment, cabinet specimens fade readily. Pure white sets are on record, and faded blues are not unusual. Two or three broods are raised in a season.

Taken near North Amherst. *Photo by the Author.*

ONE OF MR. SMITHKON'S BLUEBIRD BOXES.

A ROBIN'S NEST APPEARS IN THE CROTCH BELOW.

Doubtless Bluebird's song owes somewhat of the high estimation in which it is held to the fact that it sounds forth at a time when there are few rivals, and the aspect of nature contrasts somewhat sternly with its good cheer. Be that as it may, his soulful warbling notes will always be regarded as something half sacred by those who understand. *Cheery-cheery - cheery, dearie*, are the notes of the flight-call.

Chew-ee-i-tew, wheeoo-he-ite, chew-eew-tuiti, may serve to recall the familiar spring-time warbler.

In autumn Bluebird lingers late, hawking at insects in some sunny corner, or sampling the winter fruits which others are to gather. A favorite tidbit of this season is the berry of the common ivy, which the bird procures by fluttering before the purple clusters. When the season advances the birds retire with evident reluctance. Passing slowly overhead in little pilgrim companies they call down to you as they fly, *cheery—cheery, dearie,* half mournfully indeed, but still with tender promise of another meeting at a fairer time.

No. 100.

GOLDEN-CROWNED KINGLET.

A. O. U. No. 748. **Regulus satrapa** (Licht.).

Description.—*Adult male*: Crown-patch (partially concealed) bright orange or flame-color (cadmium orange); a border of plain yellow feathers overlying the orange on the sides; these in turn bordered by black in front and on sides; extreme forehead white, connecting with white superciliary stripe; a dark line through eye; above bright olive-green, becoming olive-gray on nape and side of head and neck; wing-quills and tail-feathers much edged with light greenish yellow, the former in such fashion as to throw into relief a dusky spot on middle of secondaries; greater coverts tipped with whitish; under parts sordid white, sometimes dusky-washed, or touched on sides with olivaceous. *Adult female*: Similar, but with crown-patch plain yellow instead of orange. *Immature*: Without crown-patch or bordering black, gradually acquiring these through gradation of color. Length about 4.00 (101.6); wing 2.26 (57.4); tail 1.71 (43.4); bill from nostril .21 (5.3).

Recognition Marks.—Pygmy size; orange, or yellow, and black of crown distinctive.

Nesting.—Does not breed in Ohio. *Nest,* pensile, but receiving auxiliary support from sides; of moss, lined with fine inner-bark strips, black rootlets, and feathers; in coniferous trees, usually at considerable heights. *Eggs,* 8-10, *in two layers,* creamy white or sordid cream-color, dotted, spotted, and blotched with pale wood-brown, and sometimes obscurely with lavender. Av. size, .54 x .40 (13.7 x 10.2).

General Range.—North America generally, except Pacific Coast, breeding in the northern and elevated parts of the United States, and northward; migrating southward in winter to Guatemala.

Range in Ohio.—Usually common winter resident and migrant throughout the state; sometimes locally absent.

OUR artist has done well to picture the royal midgets among the autumn leaves. It is when the crimson and gold are being lavished on every hillside and the year is sinking in sumptuous splendor that these little whisperers steal in upon us almost unnoticed. But when the transient glory of the trees has turned to sodden mold, the cheerful company of Kinglets is still to be found—ungarnered leaves too full of sap for October's vintage, staunch potentates unshaken by the winter winds.

It is passing strange that bits of birdanity no bigger than Hop-o'-my-Thumb should prefer to spend the winter with us, but so it is, and we are mightily cheered by their presence. Zero weather has no terrors for them and the good fellowship of winter seems in no wise marred by storms.

Kinglets go in troops which keep a little to themselves, but which are still enrolled in the membership of some larger bird-troop of winter. Brown Creepers, especially, affect their company with a persistence which must sometimes be a little vexing to the more vivacious birds; but there is no complaint or hauteur on the part of the latter, only royal tolerance. Evergreen trees are most frequented by Kinglets, and here they are almost invariably to be found during the severest weather. With tireless energy they search both bark and twigs for insects' eggs and larvae scarce visible to the human eye. They flutter about at random, hang head downward if need be, dart and start and twist and squirm, until one frequently despairs of catching fair sight of the crown for the necessary fraction of a second. Of course it's a Golden-crown; but then, we want to see it.

And all the time Cutikins is carrying on an amiable conversation with his neighbor, interrupted and fragmentary to be sure, but he has all day to it—*tss-tss-tsip-chip-tseek*. If you draw *too* near, *chip* can be made to express vigorous disapproval. Only now and then does one hear snatches of the northern song. It has something of the quality and phrasing of the better-known Ruby-crown's, but lacks distinctness, and is perhaps not so loud. One May morning a large company of Golden-crowned Kinglets held a concert in the trees of the Oberlin College campus. The fresh-leaved maples fairly resounded to their spirited music for a space of fifteen minutes; then all was silent. The Kings recollected themselves.

GOLDEN-CROWNED KINGLET
Regulus satrapa
Life-size

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No. 101.

RUBY-CROWNED KINGLET.

A. O. U. No. 749. **Regulus calendula** (Linn.).

Description.—*Adult male*: Above olive-green, duller before, brightening to greenish yellow on edgings of quills and tail-feathers; a partly concealed crest of scarlet (flame-scarlet to scarlet-vermilion); two narrow, whitish wing-bars formed by tips of middle and greater coverts; some whitish edging on tertials; a dusky interval separating greenish yellow edges on outer webs of secondaries; a whitish eye-ring and whitish skirtings around base of bill; under parts soiled white, heavily tinged with buffy and olivaceous-buff. *Adult female and immature*: Similar but without crown-patch. Length 4.00-4.50 (101.6-114.3); wing 2.33 (59.2); tail 1.72 (43.7); bill from nostril .25 (6.4).

Recognition Marks.—Pygmy size; scarlet crest distinctive. Note wing-bars and whitish eye-ring of female and young.

Nesting.—Does not breed in Ohio. *Nest,* semi-pensile; of moss, fine bark-strips, etc., neatly interwoven, lined with feathers; in coniferous trees at moderate heights. *Eggs,* 5-9, dull white or pale buffy, faintly speckled or spotted with light brown, chiefly at the larger end. Av. size, .55 x .43 (14. x 10.9) (Davie).

General Range.—North America at large, south to Guatemala, north to the Arctic Coast, breeding chiefly north of the United States and in the higher ranges of the West.

Range in Ohio.—Common spring and fall migrant.

"Where's your kingdom, little king?
Where's the land you call your own?
Where's your palace and your throne?
Fluttering lightly on the wing
Through the blossom world of May,
Whither lies your royal way?
Where's the realm that owns your sway,
Little King?"

Dr. Henry Van Dyke is the questioner, and the little bird has a ready answer for him. It is "Labrador" in May, and

"Where the cypress' vivid green
And the dark magnolia's sheen
Weave a shelter round my home"

in October. But under the incitement of the poet's playful banter the Kinglet enlarges his claim:

"Never king by right divine
Ruled a richer realm than mine!
What are lands and golden crowns,
Armies, fortresses and towns,
Jewels, scepters, robes and rings,
What are these to song and wings?
Everywhere that I can fly
There I own the earth and sky;
Everywhere that I can sing
There I'm happy as a king."

And surely there is no one who can meet this dainty monarch in one of his happy moods without paying instant homage. His imperium is that of the spirit, and those who boast a soul above the clod must swear fealty to this most delicate expression of the creative Infinite, this thought of God made luminous and vocal, and own him king by right divine.

It was only yesterday I saw him, Easter day. The significant dawn was struggling with great masses of heaped-up clouds, the incredulities and fears of the world's night; but now and again the invincible sun found some tiny rift and poured a flood of tender gold upon a favored spot where stood some solitary tree or expectant sylvan company. Along the river bank all was still. There were no signs of spring save for the modest springing violet and the pious buckeye, shaking its late-prisoned fronds to the morning air, and tidily setting in order its manifold array of Easter candles. The oak trees were gray and hushed, and the swamp elms held their peace until the fortunes of the morning should be decided. Suddenly from down the river path there came a tiny burst of angel music, the peerless song of the Ruby-crown. Pure, ethereal, without hint of earthly dross or sadness, came those limpid, welling notes, the sweetest and the gladdest ever sung—at least by those who have not suffered. It was not, indeed, the greeting of earth to the risen Lord, but rather the annunciation of the glorious fact by heaven's own appointed herald.

The Ruby-crowned Kinglet has something of the nervousness and vivacity of the typical Wren. It moves restlessly from twig to twig, flirting its wings with a motion too quick for the eye to follow, and frequently uttering a titter of alarm, *chit-tit* or *chit-it-it*. During migrations the birds swarm through the tree-tops like Warblers, but are oftener found singly or in small companies in thickets or open clusters of saplings. In such situations they

BLUE-GRAY GNATCATCHER
Polioptila caerulea
Life-size

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exhibit more or less curiosity, and if one keeps reasonably still he is almost sure to be inspected from a distance not exceeding four or five feet. It is here too that the males are found singing in spring. The bird often begins *sotto voce* with two or three high squeaks, as though trying to get the pitch down to the range of mortal ears before he gives his full voice. The core of the song is something like "*tew, tew, tew, tew, sweet to eat, sweet-oo eat,*" the last phrases being given with a rising inflection, and with an accent of ravishing sweetness. The tones are so pure that they may readily be whistled by the human listener, and a musical contest provoked in which one is glad to come out second best.

I once saw a Kinglet in a royal mood. A young Ruby-crown was carolling, and quite prettily, in the lower branches of an old oak tree hard by. I was watching him closely to see if I might catch a glint of red, when up darted an older rival and flashed a jewel so dazzling as to fairly smite the eye. The youngling felt the rebuke keenly, and retired in great confusion. It seems that when the bird is angry it has the power of erecting its crest and so unveiling the full glory of the ruby crown.

No. 102.

BLUE-GRAY GNATCATCHER.

A. O. U. No. 751. **Polioptila cærulea** (Linn.).

Description.—*Adult Male*: Above, grayish blue, brighter and bluer on head, hoary on rump; front of head, on forehead and sides, narrowly bordered with black; wings fuscous, with narrow edgings of blue-gray; tail black centrally, the outer pair of feathers white, the next pair mostly white, and the two succeeding pairs blackish touched with white, or not; under parts white, with a bluish or plumbeous tinge, changing on sides of head; eye-lids white; bill black, hooked; feet dark. *Adult female and immature*: Similar but duller; without black on head, and with bill lightening below. Length, 4.25-5.50 (108.-139.7); wing 2.02 (51.3); tail 1.92 (48.8); bill .38 (9.7).

Recognition Marks.—Pygmy to Warbler size; a slim, tidy bird with a long tail; blue-gray coloring, and black and white pattern of tail unmistakable.

Nest, a delicately modelled cup, of fine bark-strips and grasses, interwoven and bound together with cob-webs, lined with plant-down, fine grasses and horse-hair, and decorated externally with lichens; saddled upon horizontal limb, or settled into crotch. *Eggs*, 4 or 5, bluish white, speckled and spotted with reddish browns and umber. Average size, .56 x .44 (14.2 x 11.2).

General Range.—Middle and southern portions of the eastern United States, rare north of latitude 42°. South in winter to Guatemala, Cuba, and the Bahamas. Breeds throughout United States range, and winters from the South Atlantic and Gulf States southward.

Range in Ohio.—Abundant summer resident; less common northerly.

THERE are birds in whose presence you cannot help exclaiming, God bless you! and this is one of them. Why you should do it you cannot tell any more than you can tell why the same expression rises to your lips at sight of a blue-eyed babe in its mother's arms, kicking and cooing by turns and looking out upon the great round world with great round eyes of wonder. The innocence and frailty of the bird, as of the babe, touches some hidden chord of sympathy, and we cry out in mingled big-brotherly pity and astonishment.

One's first introduction to this minikin of the woods must almost of necessity be when the bird has ventured down to the lower bushes, or heaped-up

Taken near Oberlin. *Photo by the Author.*

A NEST OF THE BLUE-GRAY GNATCATCHER.

piles of brush, to search for insects or cobwebs. The little blue bundle of business passes unmindful within a dozen feet of you, or if recalled to consciousness by some stirring apprehension, pauses to wag its long tail through an arc of a hundred and eighty degrees, or else to shake it up and down through almost as great a compass. *"Biz, biz, biz,"* the midget cries, and if you can only mark the note well before the bird is lost again in the dense foliage of the tree-tops, to which it soon returns, you have grasped a thread of recognition which is always bound tightly to this little brother of the air.

Sometimes the note is doubled so that the bird seems to say, *Bawbee, bawbee,* but in any case there is a sort of buzzing resonance about it which is distinctive. The pearly fay has also a dainty rambling song full of ethereal phrases and delicate suggestiveness. In one passage it bears a marked resemblance to the *"Sweet-to-eat"* note of the Ruby-crowned Kinglet. One must, however, get very near to the singer in order to catch anything worth while, for the bird sings in the tiniest of voices.

The nest of the Blue-gray Gnatcatcher is, after the Hummingbird's, the daintiest in the woods. It is placed at any height from a dozen or fifteen feet to the limit of the trees. That seen in the illustration was taken from an elm tree at a height of sixty feet, and it is typical as to position, in showing the protecting branch above. It would be very difficult to find nests at these heights were it not for the fact that the birds fly freely and directly to the chosen spot, and occasionally betray their presence by buzzing while the nest is a-making. Both birds work with unflagging industry, and prolong their labors into the heated hours of each day. It is a rebuke to a sluggard to see one dashing up to a tree and whirling around in the nest that is to be, and laying off the cobwebs at such a furious rate. The walls of the nest are built up so high that only the tail of the sitting bird protrudes, looking curiously like a handle to this lichen-covered cup.

As soon as the young Gnatcatchers are able to make their wants known they repeat incessantly the *biz biz* notes of the parents, and thus the strenuous life of these most earnest little birds is begun at an early age.

No. 103.

WHITE-BREASTED NUTHATCH.

A. O. U. No. 727. **Sitta carolinensis** Lath.

Description.—*Adult male*: Top of head, nape, and front of back shining black, with a slight greenish reflection; remaining upper parts ashy-blue; outer wing-quills fuscous, the second and three or four succeeding primaries narrowly touched with white on outer web in retreating order; inner quills and coverts with much black centering; tail-feathers, except upper pair, black, the outer pairs squarely blotched with white in subterminal to terminal order; sides of head, and neck well up, and under parts white with a faint bluish tinge; distinctly marked, or washed more or less, on flanks and crissum with rusty brown; bill stout, subulate, the under mandible slightly recurved,—blackish plumbeous above, lighter at base of lower mandible; feet dark brown; iris brown. *Adult female*: Similar to male, but black of head and back more or less veiled by color of back. Length 5.50-6.10 (139.7-154.9); average of six Columbus specimens: wing 3.60 (91.4); tail 1.91 (48.5); bill .68 (17.3).

Recognition Marks.—Warbler to Sparrow size; tree-creeping habits; black and ashy-blue above; white below.

Nest, a deserted Woodpecker hole, or newly-made cavity in stump or tree, usually at a considerable distance from the ground, and lined with leaves, feathers, or hair. *Eggs,* 5-8, sometimes 9 or even 10, white, thickly speckled and spotted with reddish brown and lavender. Average size, .76 x .56 (19.3 x 14.2).

General Range.—Eastern United States from Georgia north to the southern British Provinces, and west to the rocky Mountains. Non-migratory.

Range in Ohio.—Of universal distribution.

Who-ew'-o°-o°-o°-o°-o°-o-o-o-o goes the Screech Owl in broad daylight. There is an instant hush in the dull gray woods—a hush followed by an excited murmur of inquiry among the scattered members of a winter bird troop. If *you* happen to be the Screech Owl, seated motionless at the base of some large tree and half recessed in its spreading roots, perhaps the first intimation you will have that the search party is on your trail will be the click, click, click of tiny claws on the tree-bole above your head, followed by a quank of interrogation, almost comical for its mixture of baffled anxiety and dawning suspicion of the truth. He is an inquisitive fellow, this Nuthatch, for, you see, prying is his business; but he is brave as well. The chances are that he will venture down within a foot or two of your face before he flutters off with a loud outcry of alarm. When excited, as when regarding a suspicious object, he has an odd fashion of rapidly right-and-left facing on a horizontal bough, as tho to try both eyes on you and lose no time in between.

Nuthatch is the acknowledged acrobat of the woods—not that he acts for display; it is all business with him. A tree is a complete gymnasium in itself,

and this bird is master of it all. Top side, bottom side, inside, outside—this bird is there, fearless, confident; in fact, he rather prefers traveling head downward, especially on the main trunk route. He pries under bark-scales and lichens, peers into crevices and explores cavities in his search for tiny insects, larvæ and insects' eggs—especially the latter. The value of the service which this bird and his close associates perform for the horticulturist is simply incalculable. There should be as heavy a penalty imposed upon one who wantonly killed a Nuthatch or a Chickadee, as upon one who entered an enclosure and cut down an orchard or a shade tree.

Taken at McConnelsville. *Photo by C. H. Morris.*
PATRONIZING THE FREE-LUNCH COUNTER.

The Nuthatch has a variety of notes, all distinguished by a peculiar nasal quality. When hunting with the troop, he gives an occasional softly resonant *tut* or *tuttut*, as if to remind his fellows that all's well. The halloo note is more decided, *tin*, pronounced à la Francais. By means of this note and by using it in combination, they seem to be able to carry on quite an animated conversation, calling across from tree to tree. During the mating season and often at other times they have an even more decided and distinctive note, *quonk, quonk, quonk*, or *ho-onk, ho-onk*, in moderate pitch and with deliberation. Their song, if such they may be said to have, consists of a rapid succes-

sion of simple sylables, *tew, tew, tew, tew, tew,* which are musical, vibrant, and far-sounding, a sort of trumpeting, out of all proportion to the size of the bird.

The nest of the Nuthatch is placed in a cavity carefully chiselled out and usually at a great height in an elm tree or perhaps an oak. Both sexes share the labor of excavation, and when the cavity is somewhat deepened one bird removes the chips while the other delves. Like all the hole-nesting species of this family, but unlike the Woodpeckers, the Nuthatches provide for their home an abundant lining of moss, fur, feathers, and the like. This precaution is justified from the fact that they are early nesters—complete sets of eggs being found no later than the second week in April.

The male is a devoted husband and father, feeding the female incessantly during incubation, and with her sharing in the care of the large family long after many birds have forgotten their young. The young birds early learn to creep up to the mouth of the nesting hole to receive food when their turn comes; and they are said to crawl about the parental tree for some days before they attempt flight.

No. 104.

RED-BREASTED NUTHATCH.

A. O. U. No. 728. **Sitta canadensis** Linn.

Synonyms.—Red-bellied Nuthatch; Canadian Nuthatch.

Description.—*Adult male*: Crown and nape shining black; white superciliary lines meeting on extreme forehead; a black band through eye; remaining upper parts grayish blue; wings fuscous, unmarked; tail-feathers, except upper pair, black; the outer pairs subterminally blotched with white in retreating order; chin, and sides of head, and neck below the black, pure white; remaining under parts rusty or ochraceous-brown; bill short, subulate, plumbeous-black; feet dark brown. *Adult female*: Similar, but crown like the back, with only traces of black beneath; lateral head-stripe blackish; usually paler rusty below. *Immature*: Like adult female. Length, 4.25-4.75 (108.-120.6); average of seven Columbus specimens: wings 2.61 (66.3); tail 1.43 (36.3); bill .50 (12.7).

Recognition Marks.—Pygmy size; black and grayish blue above; rusty below; tree-creeping habits.

Nesting.—Not known to breed in Ohio. *Nest,* of grasses, feathers, etc., in a hole of tree or stub, usually at lower levels. *Eggs,* 4 to 6, white or creamy-white, speckled with reddish brown and lavender. Average size, .59 x .47 (15. x 11.9).

General Range.—North America at large, breeding from northern New England, northern New York, and northern Michigan northward, and southward

in the Alleghanies, Rocky Mountains, and Sierra Nevada; in winter south to about the southern border of the United States.

Range in Ohio.—Not uncommon, but irregular, spring and fall migrant. Sparingly resident in winter in central and southern Ohio, casually north,—regularly wherever pine or hemlock timber occurs.

THIS migratory species is more brightly colored as well as somewhat smaller than its resident cousin, the White-breasted. It is frequently found associated with the latter in winter, perhaps regularly from the Fortieth Parallel southward, altho it is never as numerous as the resident bird. Its common note somewhat resembles the *quonk* of the local species, but it is higher pitched—at least an octave higher, Dr. Brewer says—and very nasal, *quank, quank, quank,* or *nya-a, nya-a.*

During migrations the Canadian Nuthatch is frequently associated with the Warblers, and moves freely about the smaller limbs of orchard and shade trees, especially conifers. At such times its unexpected behavior is a little puzzling, but if observed closely it will usually be seen to include in its travels a tour of the tree-trunk in characteristic Nuthatch fashion.

Its nesting is entirely extralimital, but possesses interest because of its well-established custom of plastering the space immediately surrounding the entrance to its nesting hole with pitch or fir balsam for a distance of several inches. Whether this is done to insure a safe footing for itself, or as a guard against enemies is undetermined as yet.

No. 105.

BROWN-HEADED NUTHATCH.

A. O. U. No. 729. **Sitta pusilla** Lath.

Description.—*Adult*: Above grayish blue; top of head well down, including eye and nape, grayish brown, darker on borders; a central white spot on nape; wings fuscous; bend of wing whitish; traces of white on central edges of outer primaries beginning with the second, and in retreating order; tail-feathers, except central pair, black, tipped with grayish, the outer pairs with transverse white spot retreating and fading centrally; chin and sides of head below, white; remaining under parts sordid or dingy whitish; bluish ashy on flanks; bill stout, subulate, blackish above, lighter near base of lower mandible. *Immature*: Brown of head obscured by color of back; darker and more tawny below. length, 3.85-4.50 (97.8-114.3); wing 2.57 (65.3); tail 1.29 (32.8); bill .51 (13.).

Recognition Marks.—Pygmy size; grayish brown cap and tree-creeping habits distinctive.

Nesting.—Not known to breed in Ohio. "*Nest* of feathers, grasses, etc., generally near the ground, in a tree or stump. *Eggs,* 5 or 6, white or creamy white, heavily spotted or blotched with cinnamon- or olive-brown, .56 x .46 (14.2 x 11.7)" (Chapman).

General Range.—South Atlantic and Gulf States, north to southern Maryland and (casually?) Ohio, Missouri, etc.

Range in Ohio.—Accidental in northern Ohio. Reported by Kirtland.

THE sole claim which the Brown-headed Nuthatch has to notice in this work is that established many years ago by Dr. Kirtland, who said: "I once killed a specimen in the northern part of Ohio. Only one other instance[1] is on record of its wandering so far north, so that the occurrence must be deemed very unusual. The species is generally confined to the Gulf and South Atlantic coast states, where its favorite range is in the pine barrens of Georgia and the Carolinas. It is more sociable than the Ohio Nuthatches, moving about, except during the breeding season, in considerable companies, which keep up a sibilant chatter during meal time. The nesting is similar to that of the better known species, save that it is apt to be at lesser heights, and the warm lining is less in evidence.

No. 106.

TUFTED TITMOUSE.

A. O. U. No. 731. **Bæolophus bicolor** (Linn.).

Description.—*Adult*: Above ashy gray, deepest on top of head; forehead sooty black; a conspicuous crest; sides of head and below ashy white, strongly washed with rusty on sides and flanks; bill plumbeous-black; feet plumbeous. *In winter*: The back and, usually, edgings of wing and tail more or less tinged with olive; the lower parts tinged with brownish, especially on breast. *Immature*: Less distinctly black on forehead; not so rusty on sides; bill light, except along culmen. Length, 5.75-6.50 (146.1-165.1); wing 3.13 (79.5); tail 2.67 (67.8); bill .43 (10.9).

Recognition Marks.—Sparrow size; black forehead and ashy blue crest; plain coloration in ash, whitish, and rusty.

Nest, in a hole in stump, beech-stub, or tree, of leaves, bark, corn-pith and trash, lined with hair or feathers. *Eggs,* 5-8, white or creamy-white, evenly spotted and speckled with reddish brown. Average size, .71 x .55 (18. x 14.).

General Range.—Eastern United States to the Plains, north to northern New Jersey and southern Iowa; casual in southern New England. Resident throughout its breeding range.

Range in Ohio.—of general distribution throughout the state.

1 In Michigan: See Wheaton *ad loc.*

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TUFTED TITMOUSE

Parus bicolor

10/11 Life-size

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"I don't know for the life of me what the fuss is all about, but I know there is the greatest commotion going on right under my nose. On a single branch of a scraggly hillside tree—said branch being horizontal, twelve feet long, and fifteen feet above the ground—there were gathered at practically one and the same time the following birds: Tufted Tits, three to six, Black-capped Chickadees, three or four, Carolina Wrens, three, Downy Woodpeckers, three, Wood Pewees, two or three, one Red-eyed Vireo, one Yellow Warbler, one Phoebe, an Indigo Bunting, a Redstart, one very small Crested Flycatcher and several English Sparrows—some twenty or more birds of at least twelve species—each vociferating, scolding, denouncing or at least anxiously inquiring, and many, for the lack of better employment, fighting withal. It only lasted half a minute after I arrived, but it was a stirring time while it was on, and I am all a-tremble with excitement myself. What does it all mean, anyway? The Tufted Titmice, I think, started the hubbub; but whether one of their youngsters was choking on a June bug, or had up and slapped its mother, I cannot tell." So runs the writer's note-book under date of June 17, 1902, in recording one of the most intense little episodes of bird life ever witnessed. It was just like those Titmice, anyway—inquisitive, irascible, hysterical, always kicking up a shindy among the birds. In some of their antics they are like spoiled children, but their very sauciness is their salvation.

The Titmouse is the major domo of the winter bird troop. His military crest marks him out for such an office, and his restless way of fussing up and down the line gives him a show of authority over the Nuthatches, Creepers, Woodpeckers, Chickadees, and Cardinals, which compose that motley company. He is, indeed, a most important personage, in his own eyes; but no one else takes him over seriously, and his pretentions are slyly encouraged by the knowing ones, as affording a prospective diversion amidst the tedium of winter.

The Tufted Tits come of hardy stock; altho somewhat less common in the northern portion of the state, there is no other evidence that they mind the severity of winter. The average Titmouse family, too, approaches near the proportions that our grandfathers believed in. With six or eight youngsters in a brood and two broods in a season, it is a wonder that they do not overrun the land.

Nests consist of well-lined cavities like those of the Chickadee, but the excavations more frequently follow natural lines; and for the sake of getting an easy start through an inconspicuous knot-hole, the birds will range up to thirty or forty feet in height. Less frequently deserted Woodpeckers' nests are used, and fresh holes are dug in green or rotten wood.

The *cheevy, cheevy* call of the Titmouse is one of the most familiar sounds of the woods and village groves. More loud and clear is the *Peter, Peter,* or *peto, peto* note of springtime. As a distinct modification of the first named note there is a rare musical *chöö-y, chöö-y,* which has in it much of the flute-

like character of the Wren's song. The latter bird is very apt to answer this cry with his "*Richelieu*" note, as tho he were challenged to utterance. If one is accustomed only to these clear whistled calls, it comes as a great surprise when the Titmouse bursts out with a *Chick-a-dee, Chick-a-dee-dee,* almost precisely like that of his black-capped cousin.

Taken near Columbus. *Photo by the Author.*

"AN INCONSPICUOUS KNOT-HOLE."

A PAIR OF TITMICE NESTED HERE DURING THE SEASON OF 1903.

Under date of March 31st I find: "The neighboring woods are haunted, and have been for a week or more past, by a love-lorn Titmouse who repeats *Peto, peto, peto, peto* with rapid enunciation and wearisome iteration. The bird utters this cry in groups, as above, on an average of about thirteen times a minute, and keeps it up all day long. During these days he ranges high in the trees, but stops only ten or fifteen seconds in a place,—about long enough to repeat his burden four or five times. Then comes a hiatus of a few seconds, during which time he is flitting to another perch. At a casual glance it looks as tho Mary Ann had retired to the depths of some unknown knot-hole to escape this silly chap, and we heartily wish that we might follow suit."

No. 107.

CHICKADEE.

A. O. U. No. 735. **Parus atricapillus** Linn.

Synonyms.—Black-capped Chickadee; Black-capped Titmouse.

Description.—*Adult*: Top of head and nape shining black; throat dead black with whitish skirting posteriorly; a white band on side of head and neck, increasing in width behind; back and scapulars gray with an olivaceous cast and more or less admixture of buffy at the edges and as skirting; wings and tail dusky, more or less edged, especially on greater coverts and tertials, with ashy or whitish; breast and belly white; sides, flanks and crissum washed with buffy or light rusty (nearly whitish in summer); bill and feet dark. Rather variable in size; one adult specimen in the O. S. U. collections measures: wing 2.27 (57.7); tail 2.10 (53.3); bill .34 (8.6). Another: wing 2.70 (68.6); tail 2.57 (65.3); bill .38 (9.7). Length, 4.75-5.75 (120.6-146.1); average of eight Columbus specimens of medium size: wing 2.60 (66.); tail 2.44 (62.); bill .36 (9.1).

Recognition Marks.—Warbler size; black of head and throat, and general gray tone of remaining plumage. Not certainly distinguishable by plumage alone, except in the hand, from the next species; larger.

Nest, a heavy mat of moss, grasses, and plant-down, lined with feathers, hair or fur, in made hole or natural cavity of stump or tree, usually at lower levels. *Eggs,* 5-8, white, marked sparingly with reddish brown, in small spots, tending to gather about larger end. Average size, .58 x .47 (14.7 x 11.9).

General Range.—Eastern North America north of the Potomac and Ohio Valleys. Not strictly migratory, but roving irregularly south along southern boundary of range.

Range in Ohio.—Common in northern and sub-northern Ohio. Southern extension not yet clearly defined. "Abundant resident in northern and probably eastern Ohio. Not common winter visitor in central and southern Ohio" (Wheaton).

BY a subtle instinct every one connects the Chickadee with winter. Springtime gaity is a cheap thing and is rated accordingly. Who could help being cheerful when the forests are heaving with blossom, and a thousand sweet odors are filling the nostrils? But here is a bird that loves to hear the north wind go *Woo-oo-oo,* and whose good cheer is brought to its fullest perfection only by the teasing of the frost. If you have wandered out into the leafless woods to mourn for the departed joys of summer or to sigh for the return of spring, this little fellow hastens down from the tree-tops to comfort you, and to cry *Chick-a-dee, Chick-a-dee-dee-dee.* The beady little eyes sparkle all the while with merriment, and there is no such thing as sadness possible after a visit from the Titmouse troupe.

Chickadee's good cheer is partly explained by the fact that he has a very warm coat—he looks like a little muff himself—and by the fact that the sort of food he likes is reasonably plentiful in winter. The bird eats insects at all times of year, but his staple diet is formed by the eggs and larvæ of insects. These are found tucked away in the crevices of bark, or grouped on the under surface of the smaller limbs and persistent leaves. On this account the Black-cap must frequently hang head downward, and this he does very gracefully, using his tail to balance himself with, much as a boy does his

Taken near Columbus. *Photo by the Author.*

"A CLINGING SNOW COMES AND BURIES THE NORTHERN HALF OF HIS HUNTING-GROUND."

legs in hanging from a "turning pole," swinging to and fro as if he thoroughly enjoyed it. Once in a while a clinging snow comes and buries the northern half of his hunting-ground. Then is the time to hang out a lump of suet, or to scatter bits of meat—unless your bounties are always claimed by the English sparrow.

Besides the frequent repetition of its name, *Chickadee*, the bird has a brusque *tse-day, tse-day* of uncertain meaning, and a *day, day, day, day* of discomposure and indignation. The birds of a flock intent on feeding keep

CAROLINA CHICKADEE
Parus carolinensis
Life-size

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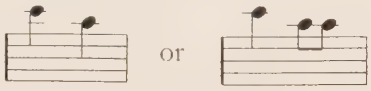
track of each other by the utterance of a faint *tsip;* and this note serves as well for the guidance of friendly Creepers and other members of the winter troop. In contrast with these more prosaic sounds comes the mating call, *Swee-tee* or *Swee-tee-tee,* high-pitched, clear and sweet as a voice of home. The notes ring true and may be readily imitated by thin lips. This song, if such it may be called, also serves a variety of purposes bordering on those of courtship, and its use by an observer often serves to call up a motley company of birds where before the woods were silent.



Contrary to the wont of most hole-nesting birds, the Chickadee believes in warm blankets. Into the chosen cavity, whether natural or artificial, the birds lug immense quantities of moss, wool, hair, or rabbits' fur, until the place is half filled; and the sitting bird, during the chilly days of April, is snug and warm.

Ordinarily a hole is dug by the birds in a rotten stub at a height of two or three feet. Sometimes a deserted nest of the Downy Woodpecker is used, but on the other hand, excavations are sometimes made in green wood. Several nests I have seen in willow and poplar saplings, and at a height of fifteen or twenty feet.

Young Chickadees are such cunning little creatures that the temptation to fondle them is often irresistible. The parents may have very decided views as to the propriety of such action, or they may regard you as some benevolent giant whose ways are above suspicion. Not infrequently the parent birds will venture upon the hand or shoulder to pursue their necessary offices, if their young are kindly entreated.

No. 108.

CAROLINA CHICKADEE.

A. O. U. No. 736. **Parus carolinensis** Aud.

Synonym.—SOUTHERN CHICKADEE.

Description.—*Adult*: Similar to preceding species, but averaging smaller; black of throat a little more extensive and sharply defined below, shining like that of crown; greater coverts *without* whitish edging, the edging of wing-quills and lateral tail-feathers less extensive, not whitish, but dull bluish ash; back, etc. uniform brownish ash; second primary appreciably longer than secondaries. Length, 4.25-4.65 (108.-118.1); wing 2.47 (62.7); tail 2.10-2.50 (53.3-63.5); average 2.19 (55.6); bill .32 (8.1).

Recognition Marks.—Pygmy size; similar to preceding species, but usually decidedly smaller; plumage not positively distinguishable except in the hand; has different notes.

Nesting.—Substantially like that of preceding species. *Eggs,* not different. Average size, .60 x .50 (15.2 x 12.7).

Taken in Morgan County. *Photo by the Author.*

A HAUNT OF THE CAROLINA CHICKADEE.

A NESTING HOLE MAY BE SEEN NEAR THE TOP OF THE CENTRAL STUB.

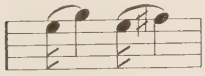
General Range.—Southeastern states, north to New Jersey and Illinois, west to Missouri.

Range in Ohio.—Common in southern, especially southeastern, Ohio. Regular but not so common in central and central-northern Ohio.

THIS bird bears so close a resemblance to the preceding species that great confusion has existed in regard to them both. In the main their habits are very similar, and the differential points sought to be established between them on this ground seem a little fanciful.

Dr. Wheaton reported the Carolina Chickadee common in the vicinity of Columbus, and considered it the only breeding species. He says, "Arrives about the middle of April; apparently departs for the south soon after the breeding season." I have never positively identified it here, and the eight local specimens in the O. S. U. collections all belong to the northern form. All recently seen in winter were certainly *P. atricapillus,* and I am inclined to think that the few local breeding birds are of the same species. On the other hand the two forms were found last winter, near the Licking Reservoir, mingling freely in a large winter troop, while *P. carolinensis* alone was found breeding there the following season. The latter bird is found exclusively in the southern part of the state, and in the Ohio River counties is one of the commonest of all birds.

The most satisfactory distinction between the two forms is that of song. The notes of the southern form are more varied, and once understood need never be confused with those of the Black-cap. The mating call usually consists of two doubled notes, *kusweé, kusweé,* and the first of each pair is lower than the other:



But in Lawrence County we heard a song of three syllables, of which the first was faintest and highest, and the remaining two showed an interval greater than the Black-cap. Sometimes the first note was raised to full rank, and we had a descending scale of three notes. We were repeatedly tricked by this Chickadee's note into looking for Cowbirds; but on second thought it was seen really to resemble more closely (and then only occasionally) that of the Rusty Grackle. In company the lesser Chickadee is given to the use of a peculiar sneezing note, *Kechezawick, kechezawick,* by which it is possible to recognize him instantly. Sometimes the bird's entire repertoire is drawn upon at once, and there issues forth a wild medley of *day, day's,* sneezes and whistled calls, which together make up a sort of ecstatic love song.

No. 109.

BROWN CREEPER.

A. O. U. No. 726. **Certhia familiaris americanus** (Bonap.).

Description.—*Adults*: Above, dark brown, broadly and loosely streaked with ashy white; more finely and narrowly streaked on crown; rump bright cinnamon; wing-quills crossed by two whitish bars, one on both webs near base, the other on outer webs alone; greater coverts, secondaries, and tertials tipped with white; tail fuscous,—slightly decurved, open W-shaped at end, of elastic, acuminate feathers; below, soiled white, sometimes tinged with tawny on flanks and crissum; bill slender, decurved. Length, 5.00-5.75 (127.-146.1); average of five Columbus specimens: wing 2.54 (64.5); tail 2.22 (56.4); bill .56 (14.2). Female averages a little smaller than male.

Recognition Marks.—Warbler size; singularly variegated in modest colors above; the only *brown* creeper.

Nesting.—Not known to breed in Ohio. *Nest,* of twigs, bark-strips, moss, etc., crowded behind a warping scale of bark. *Eggs,* 5-8, white or creamy-white, speckled and spotted with cinnamon-brown or hazel, chiefly in wreath about larger end. Average size, .61 x .47 (15.5 x 11.9).

General Range.—Eastern North America, breeding from the northern and more elevated parts of the United States northward, and casually further south; migrating southward in winter.

Range in Ohio.—Common fall and spring migrant. Winter resident in cen- and southern portions; found less commonly, or casually, in northern Ohio in winter.

DEAR, patient, plodding mortal! How we wish it were in our power to relieve him, if but for an hour, of the endless monotony of tree-climbing! But, no; he has scarcely reached the main branches of one tree-trunk when he lets go "like a bit of loosened bark," and brings up punctually at the base of another. With now and then a plaintive *chip* which is little better than a sigh, he hitches along the bark, winding spirally up the tree, and pausing at the end of every jerk to inspect the crevices for insects and their larvæ. Little attention is paid to man's presence and, indeed, the bird seems scarcely to indulge a thought above his task. Work, work, work, —while Titmouse is plotting mischief, and Chickadee is turning somersaults, this unimaginative clerk is adding up his endless columns and telling off the digits in a wiry, piping voice.

The Creeper knows that he is a near-sighted fellow, but he is sharp enough to depend on the wits of others. When the winter troop is ranging freely he follows close and pipes shrilly, "Wait for me, wait for me," if he thinks the bigger children are trying to give him the slip. I have watched a pair of them tagging a Nuthatch about from tree to tree as faithfully as a brace of poodles.

BROWN CREEPER
Certhia familiaris americana
Life-size

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Yet he too has his little pleasures. One bug is not quite like another in bugginess, so that any bark rift may render up some entomological curiosity rare of form and gustable of juice. And when the lush days of springtime come, even this understrapper gets giddy and rushes out into space, jerking hither and thither in an aerial frenzy and cutting the most absurd figures; after which he comes back to his bark, beaming and panting, and expecting the plaudits of an admiring world. This spirited performance proves highly satisfactory to at least one witness, and prepares the way for that domestic joy in the Northland, which is not denied the humblest, and which lifts all mortals to an equal plane.

While with us the Creeper rarely sings, and its ordinary notes, *chip* and *tseep, tseep,* or *"creep, creep, cree, cree,"* require careful distinction from those of the Golden-crowned Kinglet; but in its breeding haunts it is said to have a delicate and pleasing song.

No. 110.

MOCKINGBIRD.

A. O. U. No. 703. **Mimus polyglottos** (Linn.).

Description.—*Adults*: Upper parts ashy gray, sometimes with a brownish tinge; wings and tail dusky on exposed portions, with faint, grayish edging; primaries, except outer one, and secondaries broadly white at base,—the former nearly, and the latter entirely, concealed by the greater coverts, which are white with narrow blackish tips; also some edging on middle coverts and tertials; the outer pair of tail-feathers almost entirely, the next largely (on inner web), the next pair or pairs touched with, white; under parts soiled white, sometimes dingy or brownish, especially behind; bill black; feet dark. *Young*: Similar to adult, but browner above; speckled with dusky below. Length 9.00-11.00 (228.6-279.4); wing 4.45 (113.); tail 4.80 (121.9); bill .70 (17.8). Quite variable in all its dimensions. Female averages a little smaller.

Recognition Marks.—Robin size; a gray bird with a long tail, and exhibiting much white on wing in flight; unmistakable.

Nest, of twigs, weed-stalks, and trash, lined with rootlets, plant-down, hair, etc., placed at lower levels in thickets, orchard trees, etc. *Eggs,* 4-6, bluish white, greenish blue, or, rarely, buffy, spotted or blotched, chiefly near the larger end, with yellowish brown, cinnamon-brown or chestnut. Variable in size. Average .98 x .72 (24.9 x 18.3).

General Range.—United States south into Mexico. Rare or irregular north of about latitude 38°. Bahamas.

Range in Ohio.—Found frequently but not regularly during breeding season, in southern portion; breeds occasionally in southeast portion. Rare or accidental elsewhere. Formerly reported breeding near Cleveland. Casual in winter (two records).

THE Mockingbird is the acknowledged chief of American songsters, and is declared by many connoisseurs both at home and abroad to be the best in the world. Its claim to supremacy is stoutly contested by the friends of the Nightingale, and the endless discussion of their comparative merits still goes on. Instead of presuming to decide between the rival claimants, one may be permitted to point out the futility of comparisons. Enjoyment of bird music is so largely a matter of training, temperament and association, and the music itself so diverse in conception and execution, that comparisons are meaningless. As well try to decide the relative merits of the keys of E flat and C sharp, or of the violet and the blue rays of the solar spectrum. Things which belong to the same order may still be incomparable.

Certainly, however, as a mimic the Mockingbird has no peer. Nothing in bird song seems beyond him. His memory is prodigious and his artistic feeling admirable. Great individual differences exist among the performers. Other things being equal advancing age confers increasing skill. All malebirds, except the very youngest, may be able to imitate accurately, but some impart an artistic interpretative quality, which enables them easily to surpass their models. Thus a caged Mocker belonging to a Dr. Golz of Berlin captivated the heart of cultured Europe, and the hall of avian fame is still ringing with his praises.

A captive specimen I once observed in Oberlin proclaimed unconsciously the history of his early life. He reproduced not merely the bird songs of the village, but those of the wildwood as well, where he must have been reared. Besides these the various songs and noises to be heard in the average bird-store were faithfully presented. Some of his mimicry was irresistibly fetching, and I stood rooted to the pavement as the bird sang from a suspended cage at some distance. What puzzled me most, however, about his performance was that he always stood silent whenever a bantam rooster, some two blocks or so away, crowed. When his mistress assured me that it was the Mockingbird that crowed, I could scarcely believe my ears. Having always heard the rooster at a distance the Mocker reproduced the sound in exactly the same way, with the ventriloquistic effort manifestly resulting. The crowing of the bantam was a favorite trick of his, and I noticed that he usually followed it by the scream of a Hawk. The challenge of the cock followed by the cry of his enemy was certainly as clever a piece of stage-work as ever a glee club did in a melange. In the course of a quarter of an hour songs and cries of the following birds were recognized: Robin, Cuckoo, Flicker, Red-headed Woodpecker, Red-eyed Vireo, Warbling Vireo, Yellow-breasted Chat, Purple Martin, Red-shouldered Hawk, Flycatchers (probably Green-crested) fighting, Barn-

Swallow, White-breasted Nuthatch, Wood Pewee, Baltimore Oriole, Parrot, Canary, and Rooster; besides these, numerous "baby calls" not quite clear. Among his many bird-store reminiscences I made sure at one time that the monkeys were quarreling in their cage. His torrent of borrowed songs was continually changing, like a kaleidoscope. I timed him once, and the tune was changed eighty-seven times in seven minutes. Of these I was able to recognize only fifty-eight as they flew—that of the Robin appearing twenty-two times.

The bird not only sings for hours at a time during the day, but often well into the night, or, in the mating season, practically all night. According to Nehrling, the daylight hours are largely occupied with imitations and renditions of other masters, while during the night the song is almost entirely original, exhibiting the full compass of a poet's emotions, but oftenest tender and sublime. Maurice Thompson has given us unrivalled descriptions of what he is pleased to call the "dropping song," an ecstacy of the nuptial season, during which the male descends step by step an aerial staircase, measured off by the periods of his own passion during a perfect tempest of song.

Mockingbirds are very domestic in their tastes, in the double sense of being both fond of their own home and of the haunts of men. With slight encouragement they will nest in nearby shrubbery, or even in clinging vines or upon the porch rails of a house. Their presence is a benediction to a farmyard, both for the excellent music they discourse, and for the spirited defense which the male makes against Hawks and other intruders.

The occurrence of the Mockingbird in Ohio is quite irregular. It has been recorded as a transient in the northern part of the state, but its appearance anywhere in the northern two-thirds is matter of surprise. Rev. W. F. Henninger reports it as very rare in the region of the lower Scioto. Messrs. Arrick and Morris of McConnelsville reported a little colony of them breeding near that place in the summer of 1896. During January of this year the same gentlemen sent me a specimen which had been taken on the 25th of that month from a federated troop of winter birds of the usual sorts. There was two inches of snow upon the ground at the time, but the Mocker was in excellent condition.

No. 111.

CATBIRD.

A. O. U. No. 704. **Galeoscoptes carolinensis** (Linn.).

Description.—*Adult*: Slate-color, lightening almost imperceptibly below; black on top of head and on tail; under tail-coverts chestnut, sometimes spotted with slaty; bill and feet black. Length 8.00-9.35 (203.2-237.5); wing 3.59 (91.2); tail 3.65 (92.7); bill .62 (15.8).

Recognition Marks.—Chewink size; almost uniform slaty coloration distinctive.

Nest, of twigs, weed-stalks, vegetable fibers, and trash, carefully lined with fine rootlets, placed at indifferent heights in bushes or thickets. *Eggs,* 4-5, deep emerald-green, glossy. Average size, .95 x .69 (24.1 x 17.5).

General Range.—Eastern United States and British Provinces, west regularly to and including the Rocky Mountains, irregularly to the Pacific Coast from British Columbia to central California. Breeds from the Gulf States northward to the Saskatchewan. Winters in the southern states, Cuba, and middle America to Panama. Bermuda, resident. Accidental in Europe.

Range in Ohio.—Of general distribution in summer; abundant.

Taken in Licking County. *Photo by the Author.*

A GOOD PLACE FOR CATBIRDS.

THOSE who hold either a good or a bad opinion of the Catbird are one-sided in their judgment. Two, and not less than two, opinions are possible of one and the same bird. He is both imp and angel, a "feathered Mephistopheles" and "a heavenly singer." But this is far from saying that the bird lives a double life in the sense ordinarily understood, for in the same minute he is grave, gay, pensive and clownish. Nature made him both a wag and a poet, and it is no wonder if the the roguishness and high philosophy become inextricably entangled. One moment he steps forth before you as sleek as Beau Brummel, graceful, polished, equal-eyed; then he cocks his head to one side and squints at you like a thief; next he hangs his head, droops wings and tail, and looks like a dog being lectured for killing sheep;—Presto, change! the bird pulls himself up to an extravagant height and with exaggerated gruffness, croaks out, "Who are you?" Then without waiting for an answer to his impudent question, the rascal sneaks off through the bushes, hugging every feather close to the body, delivering a running fire of cat-calls, squawks and expressions of contempt. There is no accounting for him; he is an irrepressible—and a genius.

The Catbird is at home anywhere in bushes and shrubbery. River banks are lined with them, and swampy tangles are thronged with them, but they also exhibit a decided preference for the vicinage of man and, if allowed to, will frequent the plum trees and raspberry bushes. They help themselves pretty freely to the fruit of the latter, but their services in insect-eating compensate for their keep a hundred-fold. Nests are placed almost anywhere at moderate heights, but thickety places are preferred, and the Carolina rosebush is acknowledged to be the ideal spot. The birds exhibit the greatest distress when their nest is disturbed, and the entire neighborhood is aroused to expressions of sympathy by their pitiful cries.

Comparing the scolding and call notes of a Catbird with the mewing of a cat has perhaps been a little overdone, but the likeness is strong enough to lodge in the mind and to fasten the bird's "trivial name" upon it forever. Besides a mellow *phut, phut* in the bush, the bird has an aggravating *mee-a-a,* and a petulant call note which is nothing less than *Ma-a-ry.* Cautious to a degree and timid, the bird is oftener heard in the depths of the thicket than elsewhere, but he sometimes mounts the tree-top, and the opening *"Phut, phut, coquillicot"*— as Mrs. Blanchan hears it—is the promise of a treat.

Generalizations are apt to be inadequate when applied to singers of such brilliant and varied gifts as the Catbird's. It would be impertinent to say: *Homo sapiens* has a cultivated voice and produces music of the highest order. Some of us do and some of us do not. Similarly some Catbirds are "self-conscious and affected," "pause after each phrase to mark its effect upon the audience," etc. Some lack originality, feeling, are incapable of sustained effort, cannot imitate other birds, etc. But some Catbirds are among the most

talented singers known. One such I remember, which, overcome by the charms of a May day sunset, mounted the tip of a pasture elm, and poured forth a hymn of praise in which every voice of woodland and field was laid under contribution. Yet all were suffused by the singer's own emotion. Oh, how that voice rang out upon the still evening air! The bird sang with true feeling, an artist in every sense, and the delicacy and accuracy of his phrasing must have silenced a much more captious critic than I. Never at a loss for a note, never pausing to ask himself what he should sing next, he went steadily on, now with a phrase from Robin's song, now with the shrill cry of the Red-headed Woodpecker, each softened and refined as his own infallible musical taste dictated; now and again he interspersed these with bits of his own none less beautiful. The carol of the Vireo, the tender ditties of the Song and Vesper Sparrows, and the more pretentious efforts of the Grosbeaks, had all impressed themselves upon this musician's ear, and he repeated them, not slavishly, but with discernment and deep appreciation. As the sun sank lower in the west I left him there, a dull gray bird, with form scarcely outlined against the evening sky, but my soul had taken flight with his—up into that blest abode where all Nature's voices are blended into one, and all music is praise.

Taken near Waverly. *Photo by Rev. W. F. Henninger.*

AN EARLY NEST.

25

BROWN THRASHER
Toxostoma rufum
7/10 Life-size

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No. 112.

BROWN THRASHER.

A. O. U. No. 705. **Toxostoma rufum** (Linn.).

Description.—*Adult*: Upper parts, including tail, warm cinnamon-brown, or tawny-cinnamon; paler, brownish gray, on forehead; sides of head gray, obscurely dotted or mottled with brown; wings dusky on concealed webs only; coverts tipped with dusky and white; outer tail-feathers sometimes faintly tipped with whitish, often much worn and frayed; under parts white or brownish white, silky, heavily spotted on sides of throat, breast and sides, with dark brown. The spots are brown-centered and dusky-edged, or solid dusky, tear-shaped, or wedge-shaped, and sharply defined on the silky background. Bill dark brown above; lower mandible yellow at base, but dusky at end; culmen curved near tip; feet brown. Length 10.50-12.00 (266.7-304.8); average of four Columbus specimens: wing 4.07 (103.4); tail 4.90 (124.5); bill .98 (24.9).

Recognition Marks.—Robin size; cinnamon-brown above; whitish and heavily spotted below; long tail and rather long bill.

Nest, of sticks, twigs, bark-strips and trash, lined with rootlets, horse-hair, or feathers, placed at medium heights in hedge-rows, orchard trees, or thorn thickets. *Eggs,* 4-5, sometimes 6, bluish or greenish white, sometimes buffy, thickly sprinkled all over with cinnamon, but usually most thickly near larger end. Average size, 1.07 x .80 (27.2 x 20.3).

General Range.—Eastern United States west to the Rocky Mountains; north to southern Maine, Ontario and Manitoba. Breeds from the Gulf States northward. Accidental in Europe.

Range in Ohio.—Regular but not abundant summer resident throughout the state.

THE last of this splendid trio of mocking singers is even more secretive than the others in its ordinary habits, and bolder yet in song. Early in spring the Thrashers steal northward up the river valleys, skulking along fence-rows or hiding in brush-heaps and tangles, and rarely discovering themselves to human eyes until the breeding ground is reached. Here, too, if the weather is unpropitious, they will mope and lurk silently; but as soon as the south wind repeats the promise of spring the Thrasher mounts a tree-top and clears his throat for action.

Choosing usually a spot a little way removed from the road, the singer sends his voice careering over field and meadow, lane and wood-lot, till all may hear him for a hundred rods around. What a magnificent aria he sings! Precise, no doubt, and conscious, but it is full-voiced and powerful. Now and then he lapses into mimicry, but for the most part his notes are his own—piquant, incisive, peremptory, stirring. There is in them the gladness of the

open air, the jubilant boasting of a soul untamed. Each phrase is repeated twice.

> "That's the wise thrush; he sings each song twice over,
> Lest you think he never could recapture
> The first fine careless rapture."

He opens his bill wide, his body vibrates with emotion, and each note is graced by a compensating movement of the drooping tail.

Altho the Brown Thrasher does not make such hopeless confusion of jest and earnest as does the Catbird, there is still something of the buffoon about him, and his ways in the bush are not altogether above criticism. Possibly

Photo by E. B. Williamson.

NEST OF THE BROWN THRASHER.

with the best of motives, but still in a very annoying fashion the bird sneaks about through the brush and insists upon knowing your business. From time to time it utters a sharp repulsive *tsook,* and occasionally a suggestive *you-uh,* which makes one feel conspicuous and uncomfortable. The bird's eye too, with its orange iris, while it must be admitted to harmonize perfectly with the warm russet of the plumage, has a sinister cast which might prejudice the unthinking.

CAROLINA WREN
Thryothorus ludovicianus
About Life-size

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In defense if its home the Thrasher is almost fearless, often placing itself within reach of the observer's hand, and calling down upon him all the while the most dreadful woes. The female is a close sitter, and portraits *in nido* are not difficult to obtain.

Nesting sites are various, but the bird shows a decided preference for those which are naturally defended by thorns. Nearly every full sized Crategus (thorn apple) has at one time harbored a nest. Hedges of osage-orange are well patronized—almost exclusively so in the prairie states further west—and the honey-locust tree is not forgotten. Next after these come wild plum thickets, grape-vine tangles, brush heaps, fence corners, and last of all, the ground.

No. 113.

CAROLINA WREN.

A. O. U. No. 718. **Thryothorus ludovicianus** (Lath.).

Synonyms.—GREAT CAROLINA WREN; MOCKING WREN.

Description.—*Adult*: Above rufous-brown or rusty (quite variable as to shade), duller or darker on head, brighter on rump, with concealed downy white spots; wings and tail like back, but finely and rather indistinctly barred with dusky; a conspicuous, white superciliary line, bordered indistinctly behind with blackish; a broad, rusty stripe behind eye; under parts white, much washed with tawny or pale rusty across the breast and on the flanks and lower belly; sometimes the rusty is so pronounced that only the chin remains whitish; lower tail-coverts heavily barred with dusky; bill and feet brown, the former decurved. Length 5.50-6.00 (139.7-152.4); average of ten Columbus specimens: wing 2.32 (58.9); tail 1.90 (48.3); bill along exposed culmen .67 (17.).

Recognition Marks.—Warbler to Sparrow size; largest of the Ohio Wrens.

Nest, a bulky mass of grasses, hay, leaves, and trash, lined with fine grasses, feathers, etc., placed in some cavity or cranny of stump, log, brush-pile or the like. *Eggs*, 4-6, white, cream-white or light buff, thickly speckled with cinnamon-brown and lavender, well distributed or wreathed about larger end. Average size, .73 x .59 (18.5 x 15.).

General Range.—Eastern United States north to southern New York, southern Michigan and southern Nebraska; west to the Plains. Rare or casual in southern New York and southern Ontario. Resident nearly throughout its range.

Range in Ohio.—"Abundant in southern, common and resident in middle, rare in northern Ohio." Wheaton's statement still applies.

WHEN the bird man settles down into a shady nook and begins screeping, that is, making a sharp kissing sound on the back of the hand, to attract

the birds, the very first fellow to come is always the Carolina Wren. He had been catching spiders about the root of a fallen tree, but like the true Athenian, he will hear the new thing at whatever cost. Bustling, tittering, and talking excitedly to himself he hurries up. At the first sight of the stranger he jumps as if shot, but he has presence of mind enough to dodge behind a log and take chattering counsel of his fears. Then, more cautiously, he emerges and begins a systematic search. Now scampering along a log with tail in air like a chipmunk, now squatting in sudden alarm, or craning and bubbling apprehensively, the little feathered ferret turns up first on this side of you, then on that, until his curiosity is thoroughly satisfied;—it is only a man.

This little brown pixie is the most energetic and tireless creature of the woods. He not only manages to mind his own business but everybody else's as well, and if one only knew how to approach him, he would doubtless be found a perfect encyclopedia of wood-lore. He chatters with the squirrels, explores crannies with mice, climbs trees with the Creepers, and sings with the best of them. Altho quite devoted to the brush-heaps and dells of the deeper woods, he is also thoroughly at home in the vicinity of man, and often patronizes our porches and outbuildings with the freedom of a House Wren.

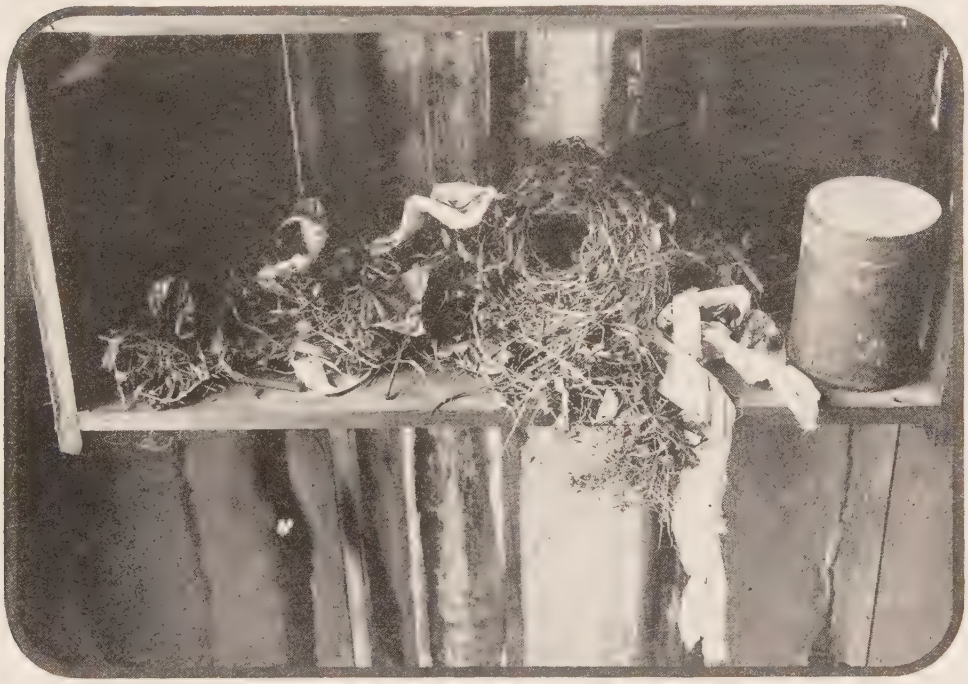
It is, however, as a songster that the Great Carolina Wren has endeared himself to the hearts of all. Those who are accustomed only to the sputtering of the House Wren are taken completely by surprise when they hear the clear, rich bugle notes of this *maestro*. Indeed, for clear enunciation, vivacity, and carrying power, they yield the palm to none. No two individuals are ever quite alike in their major notes or song, but the following are characteristic songs: *Cle-er-hé-hew, cle-er-hé-hew, cle-er-hé-hew, clé-ew; Richelieu, Richelieu, Richelieu.* One merry wight on the banks of the Muskingum, inquired of the passing canoeists, *D'y'ever tee-ter? Je-ver tee-ter? Je-ver tee-ter?* We confessed that we sometimes did, but felt obliged to decline teetering with him upon a nodding sunflower. A Cincinnati bird as gay, shouted, *Sugar to eat, sugar to eat, sugar to eat, sugar,* in a most convincing way; but this invitation also was declined.

On all occasions this nervous little creature appears to be full of a sort of compressed air, which escapes from time to time in a series of mild explosions, like the lid of a tea-kettle being jarred up and down by steam. When the valve is opened a little wider there follows an accelerando rattling call, which seems to be modeled after the chirr of the red squirrel; and when the throttle is held wide open the rattling notes are telescoped together into an emphatic *"kurr'r'st,"* which brings one up standing.

Carolina Wrens are given great credit for secretiveness. Their nests, when placed in brush piles or under logs are not always easy to locate, and even when they select a cranny in an outbuilding, the visiting parents will sometimes exhibit all the caution of spies in approaching their nest. But of-

tener they leave a trail of sound, at least, behind them. The first nest the writer ever found was exhibited gratuitously by a proud father. The bird signalled the stranger and then hopped along in plain sight, only stopping now and then to be sure that he was being followed, until he came to a sycamore stump. Here he thrust his head into a cranny and buzzed excitedly. The bird-man drew near and noted a single egg, while the Wren capered about with every appearance of delight at the admiring glances cast upon the bird-to-be.

This particular nest completely filled the cavity it occupied, and even the



Taken in McConnelsville. *Photo by the Author.*

BE IT EVER SO MUSSY THERE'S NO PLACE LIKE HOME.

entrance was "boarded up" until it represented the precise dimensions of the occupant. One of the latest pieces of furnishing consisted of a half-length of sloughed-off snake skin, which rolled easily into the center of the nest when disturbed. The nest shown in the accompanying cut is a typical accumulation of trash such as the Carolina Wren delights in. The mass to the left, poorly defined in the dim light of the tool-house, represents the "cock's nest," an incomplete structure where the male bird spends his nights.

Carolina Wrens are very prolific. Not only are seven or eight eggs sometimes laid for a sitting, but three broods are raised in a season, and these so

rapidly that the male bird often has the care of two broods while his mate is occupied with the third. The breeding season is quite variable. Many first broods are raised in March; some in February. Professor Butler records an instance in which fresh eggs were found on the first day of December, at Brookville, Indiana.

The species is on the increase, notably in the northern part of the state. It first made its appearance in Lorain County in 1899, and has been found there regularly since. In the summer of 1901 the bird was found by Professor Jones and myself on Isle St. George and on East Sister Island, the latter in Canadian territory. The geographical movement of this species is a typical example of that "northward trend," to which Professor Jones has so ably called attention in his recent Catalog of the Birds of Ohio.

No. 114.

BEWICK WREN.

A. O. U. No. 719. **Thryomanes bewickii** (Aud.).

Description.—*Adults*: Above, dark olive-brown, or rufous-brown with an olive tinge; the rump with downy, concealed, white spots; wings showing at least traces of dusky barring,—sometimes complete on tertials; tail blackish on concealed portions, distinctly and finely barred with blackish on exposed portions; the outer pairs of feathers white-tipped and showing white barring, incipient or complete on terminal third; a narrow white superciliary stripe, and an indistinct dark stripe through eye; under parts grayish white, dark tinged on sides and flanks; under tail-coverts heavily barred with dusky; bill dark brown above, lighter below; culmen slightly decurved. Length 5.00-5.50 (127.-139.7); wing 2.08 (52.8); tail 2.01 (51.1); bill .53 (13.5).

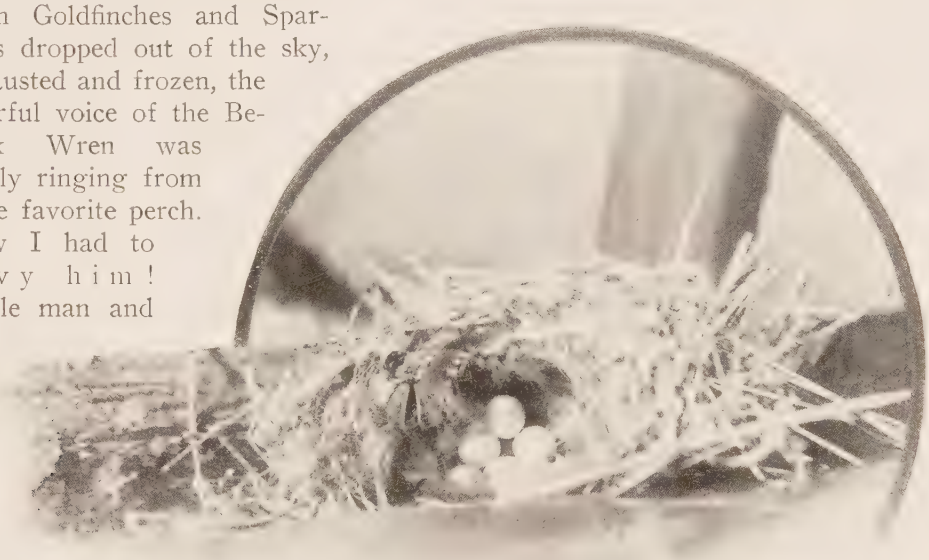
Recognition Marks.—Warbler size; known from House Wren by superciliary stripe, and whiter under parts, mostly unbarred; more deliberate in its movements.

Nest, anywhere in holes or crannies about buildings, posts, brush-heaps, etc.; of twigs, lined with grasses and miscellaneous soft materials; not distinguishable from those of *T. aedon*. *Eggs,* 4-6, sometimes 7, white, speckled—usually not so heavily as in *T. aedon*—with cinnamon- or rufous-brown, and purplish, uniformly, or chiefly in wreath near larger end. Average size, .66 x .48 (16.8 x 12.2).

General Range.—Eastern United States, west to the eastern border of the Plains and eastern Texas; rare east of the Alleghanies north of Maryland and Delaware; north irregularly in the Mississippi Valley to southern Minnesota. Migratory only along the northern border of its range.

Range in Ohio.—Formerly unknown in the state, it has recently made its appearance, and is on the increase in some parts of southern and central Ohio,—notably in the Valley of the Scioto.

BARELY known as an Ohio bird at Wheaton's time (its nest having been found once in Circleville) the Bewick Wren today is *the* Wren of Southern Ohio. Since his arrival the House Wren has "left the country" and has been entirely replaced by this better songster and thriftier species. When the chilling blasts of February, 1899, howled over the Scioto Valley bottoms and crept into every ravine of the hills, the thermometer standing at 30° below zero, when Goldfinches and Sparrows dropped out of the sky, exhausted and frozen, the cheerful voice of the Bewick Wren was loudly ringing from some favorite perch. How I had to envy him! While man and



Taken near Waverly. A NEST IN THE WOOD-PILE. *Photo by Rev. W. F. Henninger.*

beast were seeking shelter from this cold, and the earth was groaning under its burden of snow, he, undaunted, gay and light-hearted, was singing in anticipation of the joyous springtime. And again when trees and flowers bloom, or when midsummer's sun is blazing down in unabated fury, his song greets us at our home. Not a voluble merry chatter, like the House Wren's, but clear, strong and cheery, easily heard for a quarter of a mile,—such is the song of Bewick's Wren. Easily distinguished from the former he has the same teasing days about him,—now peeping into some corner, now examining the woodpile, now crawling into a knot-hole of the smoke-house, creeping forth like a mouse at the next moment, whisking his erectly-carried tail, watching you carefully though fearlessly, he all of a sudden mounts some fence-post, pours forth his proud metallic notes, drops down into the chicken yard, disappears in the pig pen, mockingly scolds at you, sings again, and is willing to keep this game up all day. We do not know which to admire more,

Taken near Waverly. *Photo by Rev. W. F. Henninger.*

BEWICK WREN'S NEST IN OLD TIN CUP.

his beautiful song or his confidence in man.

The height of these actions is reached at the mating season, for he is the bird that makes life sweet about the old log cabins, deserted woodpiles and half-destroyed orchards. Almost any place in the neighborhood of man is chosen for a nesting site. The arm-pit of an old coat, old tin and coffee cups, log cabin nooks and corners, often contain his nest. This is rather bulky, composed of sticks, grass, wool, horse and cow hairs, quail and chicken feathers, snake skins and other rubbish. From four to eleven eggs are found in it in April and again in June. They are white with various spots of lilac-gray and brown, and my observations lead me to the belief that the eggs of the older birds are more heavily spotted than those of the younger ones, and the spots are also better distributed over the entire surface of the eggs, while those of younger birds show more minute spots, and these generally in a wreath around the blunt end of the egg. In about two weeks the eggs are hatched and a jolly crowd of youngsters soon joins the parents in their insect-hunt, and the next year we have the pleasure of hearing still oftener this bold, bright songster in his native haunts. May the Bewick Wren live and thrive forever in the rugged hills of southern Ohio, to bring joy and cheerfulness to the hearts of men!

W. F. HENNINGER.

The advance of this sturdy species has progressed at least as far as Columbus, and there is every reason to suppose that it will ere long possess the state. In North Columbus, where the author has observed them for three years past, the following song-forms have been noted: *Sweée-terrr, willy, willy, willy; Sweeter-weé-lie, dong-kerwillits; Sweé-terr-link-i-tinki-tinkits; Swee-wee, chow, chee-weely.* The rendition of any of the above forms occupies about two and a half seconds, and the clear ringing notes are quite unlike any other bird song.

No. 115.

HOUSE WREN.

A. O. U. No. 721. **Troglodytes aedon** Vieill.

Description.—*Adult*: Above, grayish rufous-brown, duller and lighter on fore parts; brighter and more rufous on rump, which has concealed downy white spots; back indistinctly barred with dusky; wings on exposed webs and tail all over distinctly and finely dusky-barred; sides of head speckled grayish brown, without definite pattern; below, light grayish brown, indistinctly speckled or banded with darker brownish on fore parts; heavily speckled and banded with dusky and whitish on flanks and crissum; bill black above, lighter below; culmen slightly curved; feet brownish. Length 4.50-5.25 (114.3-133.3); wing 2.08 (52.8); tail 1.67 (42.4); bill .47 (11.9).

Recognition Marks.—Warbler size; brown above, lighter below; everywhere more or less speckled and banded with dusky, brownish, or white.

Nest, of sticks and trash, lined with fine grasses or chicken-feathers, placed in bird-boxes, holes in orchard trees, crannies of out-buildings, etc. *Eggs,* 4-8, white, heavily speckled, and usually more or less tinged with pinkish brown or vinaceous, with a wreath of a heavier shade about the larger end. Average size, .64 x .51 (16.3 x 13.).

General Range.—Eastern United States and southern Ontario, west to Indiana and Louisiana. Resident from the middle districts southward.

Range in Ohio.—Common throughout the state in towns and villages, and about farm-houses. It is being replaced in some localities of southern and central Ohio by the preceding species.

MANY years ago this cunning little bird gave up its woodland retreats and adopted the white man. The unconscious lure which led to this result was doubtless the abundance of toothsome worms, which had already adopted man's apples and currants and cabbages. Since that time the discerning have always put out boxes and gourds or cans to encourage the residence of this sprightly and valuable friend. The mutual benefit association thus formed worked admirably, until the advent of the English Sparrow, but since that

evil day the Wren has fought a losing battle. If one could believe in the survival of the "sassiest" the odds would still be in his favor, but the Wren alas! has not learned the value of coöperation, and his tiny beak, however valiant, is no match for the concerted action of the aliens. The American Wren must go.

For some reason, too, the near presence of its cousins, the Carolina and Bewick Wrens, does not seem to be congenial to this bird, and it has retired before the latter species, apparently without dispute, from the southern third of the state; and one finds it commonly only where neither of the others is to be found.

Arriving about the middle of April, the House Wren—or Jenny Wren, as it is fondly called—proceeds immediately to renovate last year's quarters, and to season the task with frequent bursts of song. In singing his joyous trill the bird reminds one of a piece of fireworks called a cascade, for he fills the air with a brilliant bouquet of song, and is himself, one would think, nearly consumed by the violence of the effort. But the next moment the singer is carrying out last year's feather-bed by great beakfuls, or lugging into some cranny sticks ridiculously large for him.

During the nesting season both birds are perfect little spitfires, assaulting mischievous prowlers with a fearlessness which knows no caution, and scolding in a voice which expresses utmost contempt. The rasping notes produced on such an occasion remind one of the energetic use of a nutmeg-grater by a determined housewife.

In providing a nest the birds usually seek to fill up the chosen cavity, whatever it be — an old coffee pot, a peck measure, a sleeve or pocket of an old coat, or a mere knot-hole—with sticks and trash. Within this mass, or preferably on the top of it, a heavily-walled cup of chicken feathers is placed, and these are held in shape by a few horse-hairs. I once found a set of Wren's eggs in the deserted nest of a Barn Swallow. Even here the second tenants had relined the nest, until there was barely room to insert the fingers between the edge of the nest and the roof of the building.

Not infrequently, whether because of the incessant persecutions of the Sparrows, or from a recurrence of ancestral tastes, nests are found far from any human habitation, in a crevice of a worm fence or in a decayed stump at the edge of the swamp.

Eggs are deposited at the rate of one each day, and incubation lasts fourteen days. Two and often three broods are raised in a season, the eggs of each succeeding set usually being less in number.

No. 116.

WINTER WREN.

A. O. U. No. 722. **Olbiorchilus hiemalis** (Vieill.).

Description.—*Adult*: Above, warm dark brown (burnt umber), duller before, brighter on rump, obscurely waved or barred with dusky on back, wings, and tail; edges of four or five outer primaries spotted with white at regular intervals; concealed white spots on rump scarce, or almost wanting; a pale superciliary line; sides of head speckled, brownish and white; under parts everywhere finely mottled, speckled, or barred,—on the throat and breast mingled brownish (Isabella-color) and white, below dusky and white, dusky predominating over brown on flanks and crissum; bill comparatively short, straight, blackish above, lighter below; feet light brown. Length about 4.00 (101.6); average of five Columbus specimens: wing 1.86 (47.2); tail 1.26 (32.); bill .40 (10.2).

Recognition Marks.—Pygmy size; dark brown above, lighter below; more or less speckled and barred all over; tail shorter than in preceding species.

Nesting.—Not known to breed in Ohio. *Nest,* of moss and a few small twigs, lined heavily with feathers, placed among roots of upturned tree, or in crannies of decayed stumps, brush-heaps, etc., *Eggs,* 5-7, white or creamy-white, dotted finely but sparingly with reddish brown; occasionally blotched with the same; sometimes almost unmarked. Average size, .69 x .50 (17.5 x 12.7).

General Range.—Eastern North America, breeding from the northern parts of the United States northward, and in the Alleghanies south to North Carolina. Winters from about its southern breeding limits southward.

Range in Ohio.—Regular during migrations, wintering southerly. Found in winter sparingly in the central portions, casual northerly. A few linger in northern Ohio into late May and are suspected of breeding.

WHEN the woods are bare and the leaves are huddled into corners to escape the teasing of a November wind, a little brown shadow flashes up for an instant at the edge of a brush heap, chitters apprehensively once or twice, and is gone again, just as you have made up your mind that the Winter Wren has come. A cautious foot resting on the heap and stirring gently will bring him out again to estimate the danger. How deliciously absurd it is! this tiny creature with its sparkling eyes and dumpy form. Its tail, too, is turned up until it leans the other way, and it gives one the impression that the bird will tumble forward and nothing to prevent it.

When driven from one cover the Winter Wren instantly seeks another, and spends little time a-wing, except as it flits from branch to branch. It is to be found principally along river bottoms and in ravines, under overhanging banks, and about upturned roots of trees. Some occasionally venture into the

barns and outbuildings of country places, or may spend the winter about the wood-pile.

The only note heard commonly is the *chitit* or *chirr* of alarm but the full song is sometimes heard in May in at least the northern tier of counties; and there is just a suspicion that it occasionally breeds. Its song is a surprising effort for a bird so tiny and obscure,—a cataract of tinkling, splashing, gurgling sounds, and wanton trills, lasting for seven or eight seconds.

No. 117.

SHORT-BILLED MARSH WREN.

A. O. U. No. 724. **Cistothorus stellaris** (Licht.).

Description.—*Adult*: Above everywhere streaked or barred with blackish, ochraceous, and white; a little clearer ochraceous on hind neck; wings and tail heavily barred, the former only on exposed webs, a very faint, pale, superciliary line; below white, clear on throat and belly, washed with ochraceous-buffy on sides of neck, across breast, and on sides; flanks and crissum darker ochraceous or tawny; bill short, dark brown above, pale below; culmen slightly decurved; feet light brown. Length 3.75-4.50 (95.3-114.3); wing 1.92 (48.8); tail 1.55 (39.4); bill .40 (10.2); bill from nostril .30 (7.6).

Recognition Marks.—Pygmy size; heavy dorsal and coronal streaking in three shades distinctive; unbarred below as compared with preceding species; bill much shorter than that of the next species.

Nest, near the ground, in a tussock of grass,—a globe formed by bringing the live grass-blades together, and interweaving with vegetable fibers and dried grasses; lined with plant-down; entrance in side. *Eggs,* 6-8, pure white, unmarked,—unique in this respect in the family. Av. size, .64 x .49 (16.3 x 12.5).

General Range.—Eastern United States, north to southern New Hampshire, southern Ontario, southern Michigan, and southern Manitoba, and west to the Plains. Winters in the South Atlantic and Gulf States.

Range in Ohio.—Rare, or casual in suitable localities,—the Reservoirs, Lake Erie swamps, etc. Has been known to breed near Cleveland.

IT has never been the author's good fortune to meet with this Wren but once, and then during migrations, when close study was impossible. It is at best a rare visitor with us, and nothing has recently come to light regarding its nesting in the state.

Mr. Ernest E. Thompson says, "This is less a species of the deep water marshes than is the long-billed member of the genus, and often it will be found

LONG-BILLED MARSH WREN
Cistothorus palustris
Life-size

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in places that are little more than damp meadows. It is remarkably mouse-like in habits and movements, and can be flushed only with extreme difficulty."

Mr. B. T. Gault, of Glen Ellyn, Illinois, found this bird not uncommon in the grassy marshes near Sheffield, Indiana, and describes the song as altogether different from that of *T. palustris*. "In the manner of delivery it forcibly reminds one of the song of the Dickcissel (*Spiza americana*) altho, of course, it was not near as loud. They were quite shy but would allow one to approach within forty or fifty feet of them, when they would dart down into the thick grass, from which it was almost impossible to dislodge them. The specimens that I secured were shot from small bushes on the edge of the marsh, these being the favorite stands occupied by the male in song."

According to Dr. Brewer, the nests of this species are constructed in the midst of tussocks of coarse, high grass, the tops of the blades being bent down and interwoven into a stout spherical ball, closed on every side save for one small aperture. The strong wiry grass of the tussock is also shot through and interlaced with finer materials brought in by the bird. The whole structure is almost impervious to rain; and the inner nest is composed of grasses and fine sedges, lined with vegetable downs.

No. 118.

LONG-BILLED MARSH WREN.

A. O. U. No. 725. **Telmatodytes palustris** (Wils.).

Description.—*Adult*: Crown blackish; forehead light brown centrally,—color sometimes spreading superficially over entire crown; hind neck and scapulars light brown (raw umber, nearly); rump warm russet; a triangular patch on back blackish, with prominent white stripes and some admixture of russet; wings and tail fuscous or blackish on inner webs, brown with black bars on exposed surfaces; sides of head whitish before, plain brown or punctate behind; a white superciliary line; under parts white, tinged with ochraceous-buff across breast, and on sides, flanks, and crissum; bill and feet as usual. Length 4.50-5.50 (114.3-139.7); av. of seven Columbus specimens: wing 1.84 (46.7); tail 1.58 (40.1); bill along culmen .53 (13.5); from nostril .43 (10.9).

Recognition Marks.—Warbler size; brown and black pattern of back with white stripes distinctive; white superciliary stripe and long bill as distinguished from preceding species. Strictly confined to cat-tails and long grass of marshes.

Nest, a ball of reeds and grasses, chinked and lined with cat-tail down, with entrance in side, and suspended in growing cat-tails (*Typha latifolia*) or bushes. *Eggs,* 5-9, so heavily speckled with olive-brown or sepia as to appear almost uniform brown. Av. size, .66 x .48 (16.8 x 12.2).

Taken at the Licking Reservoir. *Photo by the Author.*

NEST OF THE LONG-BILLED MARSH WREN.

General Range.—Eastern United States, north to Massachusetts, Ontario and southern Manitoba; wintering from the Gulf States south to eastern Mexico, and locally as far north as southern New England. Breeds throughout its United States and British American range.

Range in Ohio.—Regular summer resident in suitable localities,—the Reservoirs, Lake Erie shore, etc. Found elsewhere, but not commonly, during migrations.

TO the Coots and Rails belong the ooze-infesting morsels of the swamp, but all the little crawling things which venture into the upper story of the waving cat-tail forest belong to the Long-billed Marsh Wren. Somewhat less cautious that the water-fowl, he is the presiding genius of flowing acres, which often have no other interest for the ornithologist. There are only two occasions when the Marsh Wren voluntarily leaves the shelter of the cat-tails or of the closely related marshables. One of these is when he is driven south by the migrating instinct. Then he may be seen skulking about the borders of streams, sheltering in the weeds or clambering about the drift. The other time is in the spring, when the male shoots up into the air a few feet above the reeds, like a ball from a Roman candle, and sputters all the way, only to drop back, extinguished, into the reeds again. This is a part of the tactics of his courting season, when, if ever, a body may be allowed a little liberty. For the rest he clings sidewise to the cat-tail stems or sprawls in midair, reaching, rather than flying from one stem to another. His tail is cocked up and his head is thrown back, so that, on those few occasions when he is seen, he does not get credit for being as large as he really is.

The Wren is very free with his metallic clattering notes. As in the case of the Carolina Wren, the bird gives one the impression of being chock-full, and of needing only to turn a convenient spigot to let out a flood of sounds. There is a mixture of clicking, lisping, purring, and sweet sputtering about them all which is not at all unpleasant to the ear.

In nesting this Wren weaves a compact ball of dead reeds and grasses a little deeper than wide, and slung midway of the growing reeds, as in the illustration. The interstices of the structure are tightly packed with vegetable cotton, cat-tail down, or moss,—never mud,[1] in my experience. Entrance is effected through a hole in the side, often difficult to discover, and the interior is snugly lined with down or purloined feathers. While the female is incubating, the male has a curious habit of constructing other nests in the neighboring reeds. These cocks' nests vary from three to twenty in number, and spread out through an area of a square rod or two. Some are never

1 Dr. Wheaton says, "It is composed of coarse grasses and mud", but he is evidently misled by Dr. Brewer's statement, which, however accurate it may be for New England, centainly does not apply to nests in this region.

finished, but others are quite as carefully built as the one actually occupied. The purpose of this strange habit is unknown, except as it is probable that the male spends the night in one of them.

No. 119.

PURPLE MARTIN.

A. O. U. No. 611. **Progne subis** (Linn.).

Description.—*Adult male*: Rich, purplish black, glossy and metallic; wings and tail dead black. *Adult female*: Similar to male, but blue-black of upper parts restricted and duller; forehead, hind-neck, and lower parts sooty gray, paler on belly and crissum. Bill black, stout, and broad at the base, decurved near tip; nostrils exposed, circular, opening upward; feet moderately stout. *Young males*: resemble adult female but are somewhat darker, the steely blue appearing at first in patches. Length 7.25-8.50 (184.2-215.9); av. of eight Columbus specimens: wing 5.75 (146.1); tail 2.72 (69.1); bill, breadth at base .73 (18.5); length from nostril .33 (8.4).

Recognition Marks.—Chewink size; the largest of the Swallows; blue-black, or blue-black and sooty-gray coloration.

Nest, of leaves, grass, and trash, in some cavity, usually artificial,—bird-boxes, gourds, etc. *Eggs,* 4-5, rarely 6, pure, glossy white. Av. size, .98 x .73 (24.9 x 18.5).

General Range.—Temperate North America, north to Ontario and the Saskatchewan, south to the higher parts of Mexico, wintering in South America.

Range in Ohio.—A common resident of cities and villages; seldom abundant, but locally restricted and variable.

FROM time immemorial the garrulous Martin has enjoyed the hospitality of man. Before the advent of the Whites the Indian is said to have prepared for the yearly return of the Martin by trimming the boughs from some saplings hard by the wigwam, and "leaving the prongs a foot or two in length, on each of which he hung a gourd or calabash properly hollowed out" for the birds' accommodation. The white men were quick to follow the example set, and for many years Martin-houses, some of them quite ornate, have been a familiar feature of village and country places. These artificial quarters are exclusively used in the prairie states, but here, where timber has been so abundant, a considerable proportion have either never abandoned the ancestral fashion of nesting in hollow trees or old Woodpecker holes, or else have been driven back to it by the English Sparrows. The Martins have suffered

much at the hands of these notorious pests, and their great reduction in numbers throughout the state is doubtless due largely to this cause.

Arriving about the middle of March, in the southern part of the state, and from the first to the middle of April in the northern tier of counties, the Martins are apt to wait quietly about their houses until the weather settles. Cold days are spent altogether within doors, and a cold snap at this season is sure to decimate the species, for the bird feeds exclusively upon insects. Their food is not confined to the smaller insects, as in the case of the other Swallows, but bees, wasps, dragonflies, and some of the larger predatory beetles are consumed.

The birds mate soon after arrival. Old nests are renovated and new materials are brought in,—straw, string, and trash for the bulk of the nest, and abundant feathers for lining. They are very sociable birds, and a voluble flow of small talk is kept up by them during the nesting season. The song, if such it may be called, is a succession of pleasant warblings and gurglings, interspersed with harsh rubbing and creaking notes. A particularly mellow *coo, coo, coo* recurs from time to time, and any of the notes seem to require considerable effort on the part of the performer.

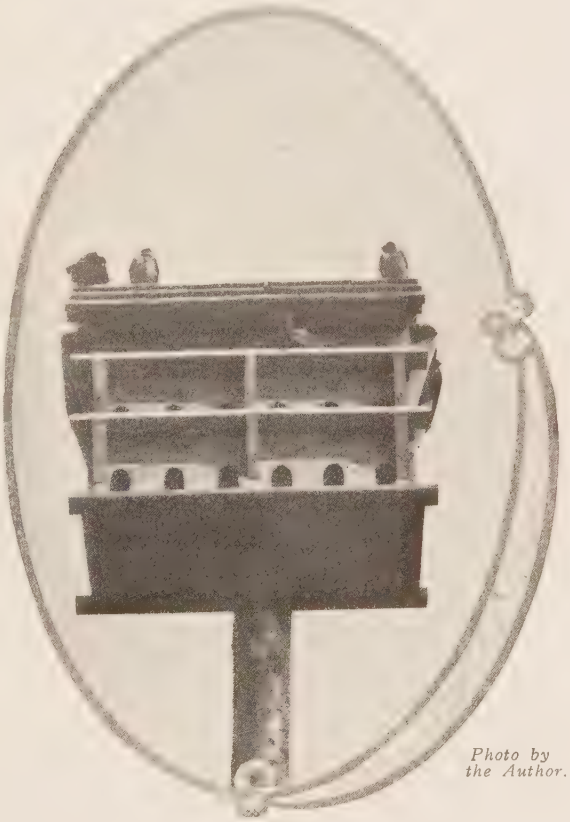


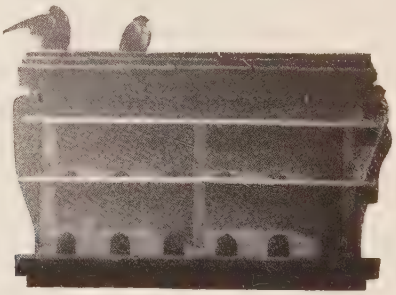
Photo by the Author.

THE MARTIN-HOUSE.

Purple Martins are not only brave in defense of their young, but often go a little out of the way to pick a quarrel with strangers. Hawks are set upon fearlessly and driven out of bounds, and the birds' presence in the barnyard is appreciated on this account. There is besides a running fight to be kept up with Wrens, Bluebirds, and English Sparrows, for possession of the home box. So far as I have been able to observe, however, the birds are not molested by the sturdier Tree Swallows, as is said to be the case in New England. In Northern Illinois the nesting houses are habitually shared

with the last named species, and the birds seem to have reached a *modus vivendi* on peaceable grounds.

At the end of the breeding season the Martins are no longer confined to the nesting site, but range freely by day, and gather in large companies to roost at night. Sometimes the ridge or cornice of a building is used for this purpose, but oftener the birds resort to some unfrequented woodland or out-of-the-way place. In the summer of 1901 we saw upwards of a thousand of them roosting in the hackberry trees of North Harbor Island, and had reason to believe that the company represented not only the entire population of the Lake Erie Islands, but a considerable number from the Canadian and Ohio mainland as well.



No. 120.

CLIFF SWALLOW.

A. O. U. No. 612. **Petrochelidon lunifrons** (Say).

Synonyms.—Eave Swallow; Republican Swallow.

Description.—*Adult*: A prominent whitish crescent on forehead; crown, back, and an obscure patch on breast steel-blue; throat, sides of head, and nape deep chestnut; breast, sides, and a cervical collar brown-gray; belly white or whitish; wings and tail blackish; rump pale rufous,—the color reaching around on flanks; under tail-coverts dusky. *In young birds* the frontlet is obscure or wanting; the plumage dull brown above, and the throat blackish with white specks. Bill and feet weak, the former suddenly compressed at tip. Length 5.00-6.00 (127.-152.4); wing 4.35 (110.5); tail 2.00 (50.8); bill from nostril .22 (5.6).

Recognition Marks.—"Warbler size," but comparison inappropriate,—better say "Swallow size"; white forehead and rufous rump. Found in colonies.

Nest, an inverted stack-shaped, or declined retort-shaped structure of mud, scantily or well lined with grass, and depending from the walls of cliffs, sides of barns under the eaves, and the like. *Eggs,* 4-5, white, spotted, sometimes scantily, with cinnamon- and rufous-brown. Av. size, .82 x .55 (20.8 x 14.).

General Range.—North America, north to the limit of trees, breeding southward to the Valley of the Potomac and the Ohio, southern Texas, southern Arizona, and California; Central and South America in winter. Not found in Florida.

Range in Ohio.—Not common summer resident. Locally abundant.

NOTHING so charms the vision of the small boy of egg-collecting proclivities as the sight of a long double row of mud bottles under the eaves of a huge hay-barn. Here at last are nests as he has dreamed of them, not the solitary baskets close hidden under a cover of protecting green, but nests out in the open, nests by the dozen—"nests to burn" as he excitedly tells himself, while he runs to besiege the farmer host for a ladder. If he climbs toward the coveted nests, anxious heads, wearing a white frown, are first thrust out at the mouths of the bottles, and then the air becomes filled with flying Swallows, charging about the head of the intruder in bewildering mazes, and filling the air with strange frangible cries, as tho a thousand sets of toy dishes were being broken. The neck of the mud flask must first be broken off before the hand can be inserted, and then the lad will find four or five speckled eggs, reposing upon the scantiest lining of straw or upon the bare mud bottom.

In building, the Swallows repair to some river bank or mud hole, and secure a pellet of mud, kneading it in the beak until the required consistency is reached, and then pressing it firmly against the chosen wall. The little mason uses its beak for both hod and trowel, and it frequently experiences no little difficulty in laying the foundations of its nest on a smoothed or painted surface. Formerly, of course, the Cliff Swallows built only against the faces of cliffs or clay banks, as they do in the West to-day in immense numbers. Now, however, they are found only on the outside of buildings, easterly, and are quite at the mercy of man's reception.

The history of this species in Ohio cannot certainly be written. It was once supposed that all "Republican" Swallows were invaders from the West, but evidence of their aboriginal occupancy of New York and some of the New England states has more recently come to light; and it is not improbable that colonies were to be found in Ohio before the advent of the white man. Audubon noted a colony at Newport, Kentucky, in 1819. Dr. Kirtland in 1838, speaks of them as having recently extended their settlements to several buildings in the western part of Cincinnati, and noted a company that same season building their nests on a barn in the northern part of Columbiana County. Dr. Wheaton in 1880 regarded the Cliff Swallow as a "very common summer resident." Today it is not at all common through any considerable section, and I have found it nesting but twice, both times in Lorain County. Its recent

defection is unquestionably due to the presence of the English Sparrows; and the unlucky farmer now has to support a gibbering swarm of grain-eating birds, where before he enjoyed the gratuitous services of a graceful host of insect-destroyers.

No. 121.

BARN SWALLOW.

A. O. U. No. 613. **Hirundo erythrogaster** Bodd.

Description.—*Adult*: Above lustrous steel-blue; in front an imperfect collar of the same hue; forehead chestnut; lores black; throat and breast rufous; the remaining under parts, including lining of wings, more or less tinged with the same, according to age and season; wings and tail blackish, with purplish or greenish reflections; tail deeply forked, the outer pair of feathers being from one to two inches longer, and the rest graduated; white blotches on inner webs (except on middle pair) follow the bifurcation. *Immature*: Forehead and throat paler; duller or brownish above; lateral tail-feathers not so long. Length about 7.00 (177.8); wing 4.75 (120.6); tail 3.00-4.50 (76.2-114.3); bill from nostril .24 (6.1).

Recognition Marks.—Aerial habit; rufous of throat and under parts; forked tail; nest *inside* the barn.

Nest, a neat bracket or half-bowl of mud, luxuriously lined with grass and feathers, and cemented to a beam of barn or bridge. *Eggs,* 3-6, of variable shape, —oval or elongated; white or pinkish white and spotted with cinnamon or umber. Av. size, .76 x .55 (19.3 x 14.).

General Range.—North America at large. Perhaps the most widely and generally distributed of any American bird. Winters in Central and South America.

Range in Ohio.—Of universal distribution. Not so plentiful as formerly.

IT takes six sorts of Swallows to make an Ohio summer, but we call that day spring when the pleasant twitterings of the Barn Swallows are to be heard in the land. The airy voyageurs have come many a league this morning, but they have time to peep into the old nests, and to make the empty rafters ring once or twice with their merry *tisic, tisic,* before they are out again to skim the meadows for an early breakfast. The very poetry of motion is theirs as they ply up and down above the clover tops, or rise at a thought to take an insect high in the air. See them, too, above the village horse-pond, skurrying after the nimble flies, now dipping into the water and just parting its surface, and now steeple lengths aloft, floating and fleeing in "higher plane curves" of flight. Surely all Swallows are graceful, but he of the forked tail is unsurpassed.

BARN SWALLOW
Hirundo erythrogaster
⅞ Life-size

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We may take it as an especial mark of the confiding nature of this bird that its nest is placed *inside* the barn, and we shall not be far astray so far as the bird's disposition is concerned. But under primitive conditions it is a cave dweller, and like Phœbe, has simply done the easiest thing upon the advent of civilization. At the head of a romantic lake in the West I once came upon a little grotto, which could be entered only from the water—or the air. In a space the size of a small room were half a dozen nests of this Swallow lodged against the granite walls. But so thoroughly familiar did the birds appear, that save for the cool lapping of the waves upon the rocks I could have imagined myself at home in father's barn.

Taken in Delaware County. *Photo by the Author.*

A BARN SWALLOW'S NEST.

Swallows are very sociable creatures, and after the families—one or two each season, as the case may be— have been successfully brought out, the birds join themselves in great roving companies which embrace their own and other kinds. This broad democracy of taste is never more clearly illustrated than when four or five sorts are seen lined up together on a telegraph wire.

No. 122.

TREE SWALLOW.

A. O. U. No. 614. **Iridoprocne bicolor** (Vieill.).

Synonym.—WHITE-BELLIED SWALLOW.

Description.—*Adult male*: Above, lustrous steel-blue or steel-green; below, pure white; lores black; wings and tail black, showing some bluish or greenish luster; tail slightly forked. *Female*: Similar to male, but duller. *Immature*: Upper parts mouse-gray instead of metallic; below whitish. Length about 6.00 (152.4); wing 4.57 (116.1); tail 2.19 (55.6); bill from nostril .25 (6.4).

Recognition Marks.—Aerial habits; steel-blue or greenish above; pure white below.

Nest, in holes in trees or, rarely, in bird houses, plentifully lined with soft materials, especially feathers. *Eggs,* 4-6, pure white,—pinkish white before removal of contents. Av. size, .75 x .54 (19.1 x 13.7).

General Range.—North America at large, breeding from the Fur Countries south to New Jersey, the Ohio Valley, Kansas, Colorado, etc.; wintering from South Carolina and the Gulf States southward to the West Indies and Guatemala.

Range in Ohio.—Common spring and fall migrant. Not common summer resident, except in a few favored localities.

ONE Swallow does not make a summer, but a little twittering company of them faring northward makes the heart glad, and fills it with a sense of exultation as it responds to the call of these care-free children of the air. This remark applies to Swallows in general, but particularly to Tree Swallows, for in their immaculate garb of dark blue and white, they seem like crystallizations of sky and templed cloud, grown animate with the all-compelling breath of spring. They have about them the marks of high-born quality, which we cannot but admire as they spurn with a wing-stroke the lower strata, and rise to accept we know not what dainties of the upper air.

The Tree Swallow is a lover of the water, and in our latitude he is detained for the summer only by the larger bodies, especially the reservoirs. In the summer of 1902 they were found to be very common at the Lewiston Reservoir, where they nested in the numerous stubs,—the water-killed remnants of previous forests. The birds are not themselves able to make excavations in the wood, but they have no difficulty in possessing themselves of others birds' labors. Old holes will do if not too old, but I once knew a pair of these Swallows to drive away a pair of Flickers from a brand new nesting-hole, and to occupy it themselves.

Among the writer's earliest oölogical recollections are those of a little stub sticking out of the muck and saw-grass of an Illinois swamp. A neat-

looking hole about eight feet up prompted instant attack. A hand was about to enter the coveted approach, when crack! went the stump, and down went the small boy with the stub on top of him. But the mud was as soft as a feather-bed and my first thought was for the eggs. There they were, four delicate pink beauties, spilled out upon the black mud, but unbroken. The nest cavity was filled within three or four inches of the entrance with chicken feathers, and the sides were lined with them to the very edge of the hole. Taking the least possible toll, one egg, I carefully replaced the others, then dragged the stub several rods to an old fence, where I bound it fast with wire to an upright post. The parent birds accepted the proffered amends; the set was completed, and a handsome brood raised.

In many localities Tree Swallows are prompt tenants of bird houses. This does not seem to be largely their habit in Ohio; doubtless because suitable nesting sites in trees are still abundant. A pair once built their nest in a sort of tower attic, just inside of a hole which a Flicker had pierced in the ceiling of an open belfry of a country church. When in service the mouth of the swinging bell came within two feet of the brooding bird. One would think that the Swallows would have been crazed with fright to find themselves in the midst of such a tumult of sound; but their enterprise fared successfully, as I can testify, for at the proper time I saw the youngsters ranged in a happy, twittering row along the upper rim of the bell-wheel.

No. 123.

BANK SWALLOW.

A. O. U. No. 616. **Riparia riparia** (Linn.).

Synonym.—Sand Martin.

Description.—*Adult*: Upper parts plain, brownish gray; wings fuscous; throat and belly white; a brownish gray band across the breast; a tiny tuft of feathers above the hind toe. There is some variation in the extent of the pectoral band; it is sometimes produced indistinctly backward, and sometimes even interrupted. Length 5.00-5.25 (127.-133.3); wing 3.95 (100.3); tail 1.97 (50.); bill from nostril .20 (5.1).

Recognition Marks.—Smallest of the Swallows; throat white; brownish gray pectoral band on white ground.

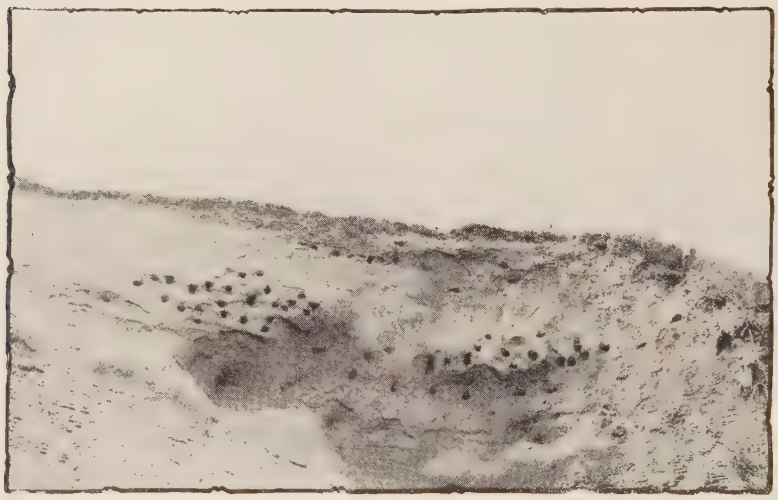
Nest, at end of tunnels in banks, two or three feet in; a frail mat of straws and grasses and occasionally feathers. Breeds usually in colonies. *Eggs,* 4-6, sometimes 7, pure white. Av. size, .70 x .49 (17.8 x 12.5).

General Range.—Northern Hemisphere; in America south to West Indies, Central America, and northern South America; breeding from the middle districts of the United States northward to about the limit of trees.

Range in Ohio.—Abundant summer resident in localities providing suitable nesting sites. More common northerly.

THE life of a Swallow is so largely spent a-wing that our interest in it centers, even more than in the case of other birds, upon that time when it is bound to earth by family ties. We are scarcely conscious of the presence of the Bank Swallows until one day we see a great company of them fluttering about a sand bank, which overlooks the river, and busily engaged in digging the tunnels which are to shelter their young for that season. These birds are regularly gregarious, and their nesting colonies frequently number hundreds of pairs.

The birds usually select a spot well up, within a foot or two of the top of a nearly perpendicular bank of clay or sand, and dig a straight, round tunnel three or four feet long. If, however, the soil contains stones, a greater length and many turns may be required to reach a safe spot for the slight enlargement where the nest proper is placed. The bird appears to loosen the earth with its closed beak, swaying from side to side the while, and, of course, fallen dirt or sand is carried out in the mouth. Sometimes the little miner finds a lens-shaped tunnel more convenient, and I have seen them as much as seven inches in width by only two in height. While the colony, especially if small, usually occupies a straggling horizontal line of holes, their burrows are not infrequently to be seen in loose tiers, in which case the bank presents a honeycombed appearance.



Taken in Lorain County. *Photo by the Author.*

THE BANK.

Communal life seems a pleasant thing to these Swallows, and there is usually a considerable stir of activity around the quarters, and a good deal of

social twittering and gyrating. The wonder is that the rapidly moving parts of this aerial kaleidoscope never collide, and that the cases of turning up at the wrong number are either so few or so amicably adjusted. The nesting season is, however, beset with dangers. Weasels and their ilk sometimes find entrance to their burrows; and they are also an easy prey to untaught small boys; while the undermining of the river or the lapping waves sometimes precipitate an entire colony—at least its real and personal property—to destruction. As an instance of the last, I remember once coming upon a large colony on the Lake Erie shore. Recent rains, added to the basal encroachment of the waves, had dislodged an extensive layer from the face of the nesting bluff, to a depth of two or three feet. The catastrophe had evidently taken place only a day or two before, and egg-shells and nesting materials were freely mingled through the fallen clay; yet the foolish birds had gone right to work again upon the same treacherous site, and in the colony of, say, five hundred birds, a hundred nests were already under way.

Bank Swallows are perhaps the least musical of their kind—unless we except the Rough-winged species, which is naturally associated with them. They have, however, a characteristic twitter, an unmelodious sound, like the rubbing together of two pebbles. An odd effect is produced when the excited birds are describing remonstrant parabolas at an intruder's head. The heightened pitch in the notes of the rapidly approaching bird followed instantly by the lower tone of full retreat, is enough to startle a slumbering conscience in one who meditates mischief against a Swallow's home.

No. 124.

ROUGH-WINGED SWALLOW.

A. O. U. No. 617. **Stelgidopteryx serripennis** (Aud.).

Description.—*Adult*: Warm brownish gray or snuff-brown, including throat and breast; thence passing insensibly below to white of under tail-coverts; wings fuscous. *Young birds* exhibit some rusty edging of the feathers above, especially on the wings, and lack the peculiar, recurved hooks on the edge of the outer primary. Size a little larger than the last. Length 5.00-5.75 (127.-146.1); wing 4.30 (109.2); tail 1.85 (47.); bill from nostril .21 (5.3).

Recognition Marks.—Medium Swallow size; throat not white; warmish brown coloration, and brownish suffusion below fading to white on belly. It is easy to distinguish between this and the preceding species if a little care is taken to note the general pattern of under parts.

Nest, in crevices of cliffs and shale banks, at end of tunnels in sand banks, or in crannies of bridges, etc.; made of leaves, grasses, feathers, and the like,—bulky or compact according to situation. *Eggs,* 4-8, white. Av. size, .74 x .51 (18.8 x 13.).

General Range.—United States at large, north to Connecticut, southern Ontario, southern Minnesota, British Columbia, etc., south through Mexico to Costa Rica. Breeds throughout United States range and south into Mexico.

Range in Ohio.—Commonly distributed along streams; less common northerly.

SCIENCE has long denied to this bird the right to shine in its own light, and has always used the preceding species as a foil, or background of comparison, in describing this one. Nor is it easy to break with the precedent now hoary with age. The Rough-winged Swallow is very like the Bank Swallow, but it differs thus and so and so. In the first place it has those curious little hooklets on the edge of the wing (specifically on the outer web of the first primary)—nobody knows what they are for. They surely cannot be of assistance in enabling the bird to cling to perpendicular surfaces, unless, indeed, it be head downward—a habit which, so far as I am aware, has never been observed. It is easy to see how the bird might brace its roughened wings against the sides of its burrow to prevent forcible abduction, but it is not so easy to see who would want to coerce the gentle creature in any such way.

Again the Rough-winged Swallow has a steadier, rather more labored flight than that of his foil. Its aerial course is more dignified, leisurely, less impulsive and erratic. In nesting, altho it may include the range of the Sand Martin, or even nest side by side with it, it has a wider latitude for choice and is not hampered by local traditions. If it burrows in a bank it is quite as likely to build near the bottom as the top. Crevices in shale walls or stone quarries, crannies and abutments of bridges, or even holes in trees are utilized. Dr. Wheaton sites many instances of birds nesting about brick buildings, some of which were in the busiest parts of Columbus. One guileless bird I knew excavated a nest in a little bank of an ungraded lot only three feet above the sidewalk of a prominent street in Seattle.

Unlike the Bank Swallows the Rough-wings do not colonize to any extent, but are rather solitary. A single pair may choose a site in some sheltered spot of a steep shalebank far from kith or kin, or again several pairs may be attracted to the same gravel pit by its easy conditions.

Further than this the species under consideration resembles the other bird quite closely in notes, in habits, and in general appearance, being distinguishable only by a sharp eye in accordance with the suggestions given above. It seems certain that the habits of the species are undergoing a considerable and

rapid change. The birds are adjusting themselves readily to the new conditions brought in by civilization, and are steadily increasing in numbers. In many localities in the middle and southern portions of the state they may be reckoned, after the Barns, our commonest Swallows.

Taken near Sugar Grove. *Photo by the Author.*

ROUGH-WINGED SWALLOWS HAVE AN EYE TO BEAUTY

A PAIR OF THE BIRDS ARE NESTING IN ONE OF THE CRANNIES JUST ABOVE THE CENTER.

No. 125.

BOHEMIAN WAXWING.

A. O. U. No. 618. **Ampelis garrulus** Linn.

Description.—*Adults*: A conspicuous crest; body plumage soft, grayish-brown or fawn-color, shading by insensible degrees between the several parts, back darker, passing into bright cinnamon-rufous on forehead and crown, and through dark ash of rump and upper tail-coverts into black of tail; tips of tail feathers abruptly yellow (gamboge); breast with a vinaceous cast, passing into cinnamon-rufous of cheeks; a narrow frontal line passing through eye, and a short throat-patch velvety black; under tail-coverts deep cinnamon; wings blackish-ash, the tips of the primary coverts and the tips of the secondaries on outer webs, white; tips of primaries on outer webs bright yellow, whitening outwardly; the shafts of the rectrices produced into peculiar flattened red "sealing-wax" tips; bill and feet black. Length about 8.00 (203.2); wing 4.61 (117.1); tail 2.56 (65.); bill .47 (11.9).

Recognition Marks.—Chewink size; grayish-brown coloration. As distinguished from the much more common Cedar-bird: belly *not* yellow; white wing-bars; under tail-coverts cinnamon.

Nesting.—Does not breed in Ohio. Like that of next species. *Eggs,* larger. Av. size, .98 x .69 (24.9 x 17.5).

General Range.—Northern portions of northern hemisphere. In North America, south in winter irregularly to Pennsylvania, Ohio, Illinois, Kansas, southern Colorado, and northern California. Breeds north of United States; also, possibly, in the mountains of the West.

Range in Ohio.—Irregular and rare in northern portion in winter.

PERHAPS we shall never know just why these gentle Hyperboreans spend their winters now in New England, now in Wisconsin, now in Washington, or throughout the northern tier of states at once. Their southward movement is doubtless dictated by hunger, and the particular direction may be determined in part at least by the prevailing winds. Years have passed since any have been seen in Ohio, but they are likely to reappear any winter. Usually they appear in flocks of several hundred individuals, and it is asserted on what seems to be good authority[1]; that millions were once seen on the Powder River in Wyoming in flocks rivalling in extent those of the Wild Pigeons.

The Northern Waxwing is a bird of unrivalled beauty, even surpassing that of the Cedarbird, which it closely resembles in appearance and habits. When with us it feeds by preference upon the berries of the mountain ash and the red cedar, and more rarely upon persimmons. Its life history is as yet imperfectly known, altho it has been found breeding near the Yukon and Anderson Rivers. It has even been surmised to breed irregularly in the mountains of the United States.

1 See Coues' "Birds of the Northwest," p. 92.

BOHEMIAN WAXWING
Ampelis garrulus
Life-size

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No. 126.

CEDAR WAXWING.

A. O. U. No. 619. **Ampelis cedrorum** (Vieill.).

Synonyms.—CEDAR-BIRD; CHERRY-BIRD; CAROLINA WAXWING.

Description.—*Adults*: A conspicuous crest; extreme forehead, lores, and line through eye velvety-black; chin blackish, fading rapidly into the rich grayish-brown of remaining fore-parts and head; a narrow whitish line bordering the black on the forehead and the blackish of the chin; back darker, shading through ash of rump to blackish-ash of tail; tail-feathers abruptly tipped with gamboge yellow; belly sordid yellow; under tail-coverts white; wings slaty-gray, primaries narrowly edged with whitish; secondaries and inner quills without white markings, but bearing tips of red "sealing-wax"; the tail-feathers are occasionally found with the same curious, horny appendages; bill black; feet plumbeous. Sexes alike, but considerable individual variation in number and size of waxen tips. *Young,* streaked everywhere with whitish, and usually without red tips. Length 6.50-7.50 (165.1-190.5); wing 3.70 (94.); tail 2.31 (58.7); bill .40 (10.2).

Recognition Marks.—Sparrow size; soft grayish-brown plumage; crest; red sealing-wax tips on secondaries; belly yellow; wings without white bars or spots, as distinguished from preceding species.

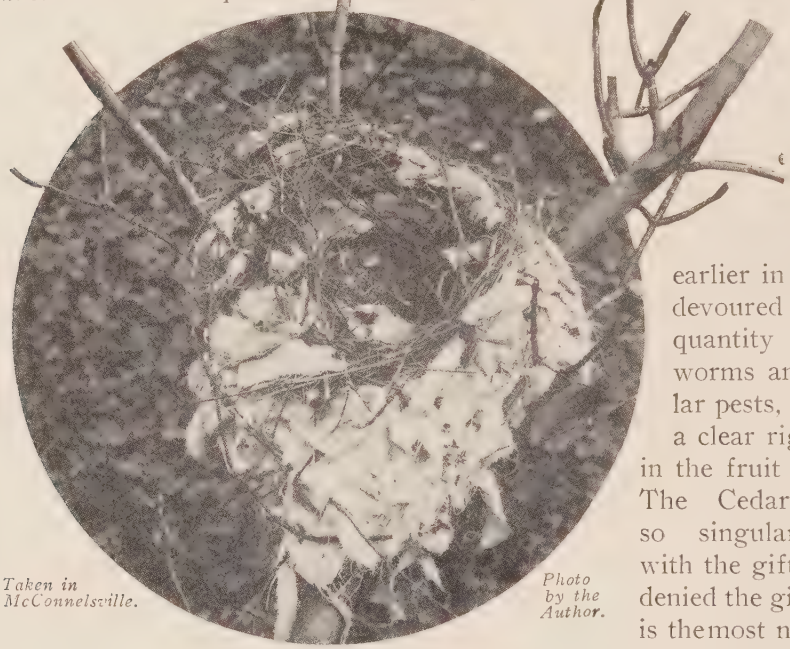
Nest, a bulky affair of leaves, grasses, bark-strips and trash, well lined with rootlets and soft materials; placed in crotch or horizontally saddled on limb of orchard or evergreen tree. *Eggs,* 3-6, dull grayish blue or putty-color, marked sparingly with deep-set, rounded spots of umber or black. Av. size, .86 x .61 (21.8 x 15.5).

General Range.—North America at large, from the Fur Countries southward. In winter from the northern border of the United States south to the West Indies and Costa Rica. Breeds from Virginia, Kentucky, Kansas, etc., northward.

Range in Ohio.—Of regular occurrence in the State, but irregular or variable locally. Resident, but less common in winter.

ONE does not care to commit himself in precise language upon the range of the Cedar-bird, or to predict that it will be found at any given spot in a given season. The fact is Cedar-birds are gypsies of the feathered kind. There are always some of them about somewhere, but their comings and goings are not according to any fixed law. A company of Cedar-birds may throng the barren maples in your front yard some bleak day in December; they may nest in your orchard the following July; and you may not see them on your premises again for years—unless you keep cherry trees. It must be confessed (since the shade of the cherry tree is ever sacred to Truth) that the Cedar-bird, or "Cherry-bird," has a single passion, a consuming desire for cherries. But don't kill him for that. You like cherries yourself. All the more reason then why you should be charitable toward a brother's weakness. Besides he is so handsome, handsomer himself than a luscious cherry even. Feast your

eyes upon him—those marvelous melting browns, those shifting saffrons and Quaker drabs, those red sealing-wax tips on the wing-quills (he is canning cherries, you see, and co mes provided). Feast your eyes, I say, and carry the vision to the table with you, and a few less cherries. Or if there are not enough for you both, draw a decent breadth of mosquito-netting over the tree, and absolve your soul of murderous intent. Remember, too, if you require self-justification, that earlier in the season he devoured an enormous quantity of canker worms and other similar pests, so that he has a clear right to a share in the fruit of his labors. The Cedar-bird being so singularly endowed with the gift of beauty, is denied the gift of song. He is the most nearly voiceless of any of the American Oscines, his sole note being a high-pitched, sibilant squeak. Indeed, so high-pitched is this extraordinary note, that I find several of my friends cannot hear it at all, even when the Waxwings are squeaking all about them. It is an almost uncanny spectacle, that of a company of Waxwings sitting aloft in some leafless tree early in spring, erect, immovable, like soldiers on dress parade, but complaining to each other in that faint, penetrating monotone. It is as tho you had come upon a company of the Immortals, high-removed, conversing of matters too recondite for human ken, and who survey you the while with Olympian disdain. You steal away from the foot of the tree with a chastened sense of having encountered something not quite understandable.



Taken in McConnelsville. *Photo by the Author.*

A PARTNERSHIP AFFAIR.

MR. C. H. MORRIS FURNISHED THE RAGS AND THE CEDAR-BIRD DID THE WORK.

The dilatory habits of these birds are well shown in their nesting, which they put off until late June or July for no apparent reason. They build a thick-walled, well-set structure of weed-stalks, roots, grass, etc., oftenest in orchard

trees, especially apple. In their nesting they are usually half gregarious, so that a small orchard may contain a dozen nests, while another as good, a

Photo by J. B. Parker.

CANNING SEASON.

THE FEMALE CEDAR-BIRD IS FEEDING THE YOUNG RIPE CURRANTS.

little way removed, has none. During the breeding season the birds are unusually silent, but when discovered stick closely to their nests even to the point of being taken by the hand. It is on this account, as well as for their sleekness, that they are favorite birds with the photographer.

No. 127.

NORTHERN SHRIKE.

A. O. U. No. 621. **Lanius borealis** Vieill.

Synonyms.—GREAT NORTHERN SHRIKE; BUTCHER-BIRD.

Description.—*Adult*: Upper parts clear, bluish gray, lightest—almost white—on upper tail-coverts; extreme forehead whitish; wings and tail black, the former with a conspicuous white spot at base of primaries, the latter with

large, white terminal blotches on outer feathers, decreasing in size inwardly; a black band through eye, including auriculars; below grayish white, the feathers of the breast and sides narrowly tipped with dusky, producing a uniform, fine vermiculation which is always present; bill blackish, lightening at base of lower mandible; feet black. *Young* birds are barred or washed with grayish brown. The plumage of adult is sometimes overcast above with a faint olivaceous tinge. Length 9.25-10.75 (235.-273.1); wing 4.50 (114.3); tail 4.19 (106.4); bill .72 (18.3).

Recognition Marks.—Robin size; gray and black coloring; sharply hooked bill; breast vermiculated with dusky, as distinguished from next species.

Nesting.—Does not breed in Ohio. *Nest,* a well constructed bowl of sticks, thorn-twigs, grasses, and trash, heavily lined with plant-down and feathers; in bushes or low trees. *Eggs,* 3-7, dull white or greenish gray, thickly dotted and spotted with olive-green, brown, or lavender. Av. size, 1.07 x .78 (27.2 x 19.8).

General Range.—Northern North America; south in winter to the middle portions of the United States. Breeds north of the United States except sparingly in northern New England.

Range in Ohio.—Not uncommon spring and fall migrant; occasional winter resident.

FLITTING like a gray ghost in the wake of the cheerful hosts of Juncoes and Redpolls, comes this butcher of the North in search of his accustomed prey. If it is his first visit south he posts himself suddenly upon the tip of a neighboring tree and rasps out an inquiry of the man with the gun. Those that survive these indiscretions are thereafter faintly descried in the distance either in the act of diving from some anxious summit, or else winging swiftly over the inequalities of the ground.

All times are killing time for this bloodthirsty fellow, and even in winter he "jerks" the meat not necessary for present consumption—be it chilly-footed mouse or palpitating Sparrow—upon some convenient thorn. In spring the north-bound bird is somewhat more amiable, being better fed, and he pauses from time to time during the retreat to sing a strange medley, which has won for him the name "Great Electric Buzz." This is meant for a love song, and is doubtless so understood by the proper authorities, but its rendition sometimes produces about the same effect upon a troop of Finches which a catamount's serenade has upon the cowering deer.

It is quite the fashion nowadays to discover, after much scrutiny of rudely arrested meals, that various bird-devils are not really so black as they have been painted. This is welcome news to those of us who have become so thoroughly identified with the bird-world as to desire easy shrift for its sins; but one wonders in the case of the Butcher-bird at least, whether the laity will receive it. It is high doctrine for one who has really seen the cruel beak dyed red with

LOGGERHEAD SHRIKE
Lanius ludovicianus

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some winter songster's gore. I, for one, am willing to accept with becoming humility the verdict of the leading stomachologists with reference to most birds, but when one of them extols the moderation of the Northern Shrike, I reserve the right to do a little incredulous grumbling. It is true that the bird sometimes allows his fond glance to fall upon the English Sparrow—and in so far he is above reproach—but it is not recorded that the creature exercises proper discrimination between the beggar in fustian and our gentle guests of woodland and weed-lot. No doubt, too, our northern brigand would eat mice or grasshoppers by preference, and does when opportunity offers, but it is no fault of ours that we cannot set such viands before his butchership in winter, so that he must needs fall to eating our Juncoes and Goldfinches. The slaughter of Horned Larks and the terrorizing of an innocent band of Tree Sparrows are offences not easily forgiven. Have at thee, Sirrah! My gun is loaded!

No. 128.

MIGRANT SHRIKE.

A. LOGGERHEAD SHRIKE.

A. O. U. No. 622. **Lanius ludovicianus** Linn.

Description.—*Adult*: Dark bluish gray above; rump just perceptibly lighter; lower scapulars tipped with black; wings black, a small white spot at base of primaries; the inner quills narrowly tipped with white; tail black, the outer pair of feathers broadly tipped with white, and the succeeding pairs less so or not at all; below grayish white, sordid on breast, but everywhere strongly contrasting with upper parts; narrow frontal line, including nasal tufts, lores and ear-coverts, black,—continuous, and passing mostly below eye; bill and feet black. *Immature*: Colors of adult less strongly contrasted; lower parts washed with brownish; loral bar obscure; more or less vermiculated with dusky all over (in younger birds), or upon the under parts alone; ends of wing-quills, coverts, and tail-feathers often with ochraceous or rusty markings. Length 9.00 (228.6); wing 3.78 (96.); tail 3.70 (94.); bill .61 (15.5). The description is from a typical South Carolina bird in the O. S. U. collection. Ohio birds, even when clearly referable to this form, average much lighter and somewhat larger.

Recognition Marks.—Chewink to Robin size; dark gray above; whitish below; black patch on head; white spot on wing; breast of adult unmarked, as distinguished from *L. borealis;* dark gray or ashy on rump, as distinguished from *L. l. excubitorides.*

Nest, a bulky, but well put together mass of sticks, thorn-twigs, weed-stalks and the like, carefully lined with plant-down, wool or feathers, placed five to

fifteen feet high in orchard trees, thorn hedges, etc. *Eggs,* 3-6, sometimes 7, dull grayish, or greenish white, thickly speckled and spotted with olive- or reddish-brown. Av. size, .97 x .73 (24.6 x 18.5).

General Range.—Eastern United States, west to the Plains; north to the Great Lakes, northern New England, etc. Breeds throughout its range.

Range in Ohio.—Of casual occurrence throughout the state. This form seems to have entered the state by encroachment from the south, and is perhaps more distinct southerly.

For convenience this form and the next (whatever their relationships) are treated together under the common name Migrant Shrike.

B. WHITE-RUMPED SHRIKE.

A. O. U. No. 622a. **Lanius ludovicianus excubitorides** (Swains.).

Synonyms.—BUTCHER-BIRD; MOUSE-BIRD.

Description.—*Adult*: Similar to preceding species but paler; the upper tail-coverts more or less distinctly whitish, the white of scapulars more extensive. Dimensions a little larger, save of bill, which is about the same. Length 8.00-10.00 (203.2-254.). A typical Columbus male measures: wing 3.96 (100.6); tail 3.98 (101.1); bill .61 (15.5). Average of six Columbus specimens of the combined forms: wing 3.93 (99.8); tail 3.81 (96.8); bill .62 (15.8).

Recognition Marks.—Same size as preceding; paler; "rump" whitish.

Nesting.—Same as preceding species.

General Range.—"Western North America, from the Plains to the Pacific, except Coast of California; and from Manitoba and the Plains of the Saskatchewan south over the tablelands of Mexico." Its range extends eastward around the Great Lakes, and southerly, where it intergrades with the preceding species.

Range in Ohio.—Of general distribution, thinning out southerly. There is no fixed line geographically or zoologically between this and the preceding form. Either may be found anywhere in the state, and may bear any family relation to the other apparent subspecies.

The "Shrike question" is still unsettled. The relation of the two subspecies in this state puzzles the professional as well as the amateur. Whether indeed Ohio represents intermediate ground where we should expect every degree of intergradation (since by definition, subspecies are forms known to intergrade), or whether it is comparatively new territory entered by two diverse elements, which, because of their previous affiliation, tend to coalesce; or whether, finally, the Ohio bird should be subspecifically distinguished from the *L. ludovicianus* of the South, and recognition made of a constant infusion from the West,—all these are points not yet decided, and perhaps indeterminable. An attempt has been made to separate the Shrike of the middle North under the name *L. l. migrans.* Altho the characters shown, especially that of larger size, are fairly constant, they have been deemed too trifling for recognition, and the A. O. U. committee reported unfavorably upon the proposed subspecies. Perhaps the easiest

way to account for the considerable diversity which we find in specimens, is simply to recognize this state as a meeting ground of two forms which have attained their maximum differentiation elsewhere,—*ludovicianus* in the South,

Taken near Columbus. *Photo by the Author.*

THE SHRIKE'S FORTRESS.

THE TREE IS A HONEY-LOCUST, AND A NEST OF THE SHRIKE APPEARS ON THE RIGHT.

and *excubitorides* in the West—and without attempting to assign subspecific value to the various phases as they appear. Hence, however we may regard, from

the scientific point of view, the attempt to lump Ohio varieties together under the proposed name *L. l. migrans,* I think there can be no doubt whatever of the propriety of adopting for common use the term MIGRANT SHRIKE to cover all differences.

Those whose delight it is to weigh carefully the shades of difference between tweedle-dum and tweedle-dee may seek the doubful illumination of the preceding fine print, but plain folk who desire to know something of the local Butcher-bird will prefer to begin HERE.

In all but southern localities, where the species is partially resident, the Shrike arrives about the middle of March. His patchy plumage harmonizes more or less with the snow-checkered landscape, but he is nowise concerned with problems of protective coloration. Seeking out some prominent perch, usually at this time of year a fence-post, he divides his time between spying upon the early-creeping field mice and entertaining his lady love with outlandish music. Those who have not heard our resident Shrike *sing* have missed a treat. He begins with a series of rasping sounds, which are probably intended to produce the same receptive condition on his audience which Ole Bull secured by awkwardly breaking one string after another on his violin until only one was left. There the resemblance ceases, however, for where the virtuoso could extract a melody of marvelous range and sweetness from his single string, the bird produces the sole note of a struck anvil. This pours forth, however, in successive three-syllabled phrases like the metallic and reiterative clink of a free-falling hammer. The chief difference which appears between this love song and the ordinary call of

Taken near Columbus. *Photo by the Author*

MIGRANT SHRIKE AT NEST.

A CLOSER VIEW OF THE NEST SHOWN IN THE PRECEDING ILLUSTRATION. THE BIRD IS PERCHED UPON THE EDGE OF THE NEST BUT IS SCARCELY DISTINGUISHABLE IN THE MAZE.

warning or excitement is that in the latter case the less tender passions have weighted the clanging anvil with scrap iron and destroyed its resonance.

The Shrike is a bird of prey, but he is no restless prowler wearing out his wings by incessant flight,—not he. Choosing rather a commanding position on a telegraph wire or exposed tree-top, he searches the ground with his eye until he detects some suspicious movement of insect, mouse, or bird. Then he dives down into the grass, and returns to his post to devour at leisure. I once saw a Shrike rise perpendicularly some fifty feet from a telegraph wire by a labored but rapid flight to seize an insect to me invisible, and repair with it to a stone wall. Here he dealt his catch a severe blow, and when satisfied that it was dead, ate it contentedly.

Like most guilty birds, and some innocent ones, the Shrike usually selects a thorn tree for a home. Honey-locusts and the various species of Crataegi are favorite places, but osage-orange hedges also present irresistible attractions. It is safe to say that there is not a mature ten-rod stretch of these delectable thorns in open country which has not harbored one or more nests of this bird. Not only do thorns protect the Shrikes from their enemies, but they afford them convenient hooks for the preservation of game. Mice, grass-hoppers, sparrows, garter-snakes, — anything which the over-fed butcher does not care for at the time of capture, is impaled on a thorn for future reference, or as a ghastly warning to the unwary. Besides that which is laid up, the bird, in the case of larger game, invariably seeks the assistance of a thorn or splinter to enable it to rend its catch for immediate consumption.

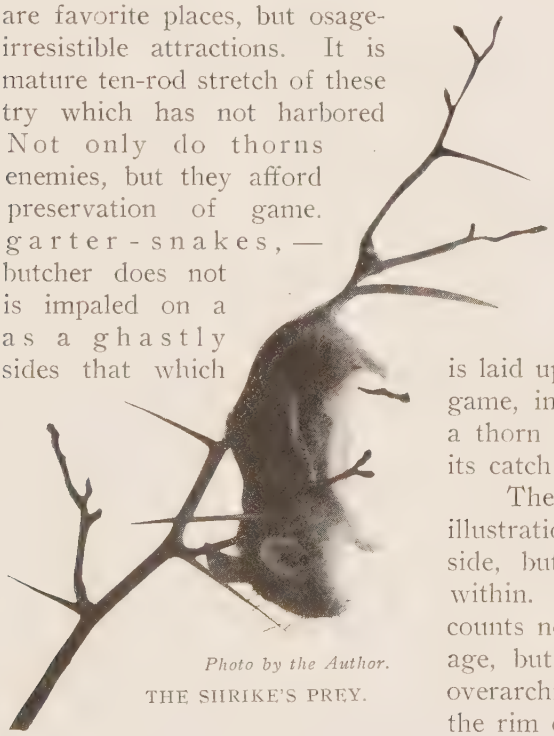


Photo by the Author.
THE SHRIKE'S PREY.

The nest—admirably shown in our illustration—is usually a bulky affair outside, but exceedingly tight and warm within. Since the bird nests early, it counts nothing on the protection of foliage, but cunningly screens its eggs by overarching chicken feathers worked into the rim of the nest. First sets are commonly found by the middle of April, but the birds usually nest again in June. They are singularly indifferent, as a rule, to the welfare of the nest, but when it is disturbed sit clinking in the distance, or absent themselves entirely. Occasionally, however, especially if the young are well grown, they make a spirited and deafening defense. Eggs are deposited on successive or alternate days, and incubation is accomplished in about two weeks.

The Loggerhead, or Migrant Shrike, has increased somewhat within recent years, except in those localities where it has been subjected to a thoughtless persecution. It is perhaps a thankless task to speak a good word for this rapacious renegade "song-bird," who flaunts his butcheries in our very faces, but we must always defer to the sum of the facts, not to those alone which are apparent. Birds are found to constitute only eight per cent of the Shrike's food throughout the year, and those mainly of seed-eating varieties. Sylvester D. Judd, Ph. D., in an elaborate report upon the subject of the Shrike's food, concludes, "The Loggerhead's beneficial qualities outweigh 4 to 1 its injurious ones. Instead of being persecuted, it should receive protection."

No. 129.

RED-EYED VIREO.

A. O. U. No. 624. **Vireo olivaceus** (Linn.).

Description.—*Adult*: Crown grayish slate, bordered on either side by blackish; a white line above the eye, and a dusky line through the eye; remaining upper parts light olive-green; wings and tail dusky with narrow olive-green edgings; below dull white, with a slight greenish-yellow tinge on lining of wings, sides, flanks, and crissum; first and fourth, and second and third primaries about equal, the latter pair forming the tip of wing; bill blackish at base above, thence dusky or horn-color, pale below; feet leaden blue; iris red. Little difference with age, sex, or season, save that young and fall birds are brighter colored. Length 5.50-6.50 (139.7-165.1); av. of three Columbus specimens: wing 3.03 (77); tail 1.99 (50.5); bill from nostril .36 (9.1);—a little below average in size.

Recognition Marks.—Warbler size; largest; white superciliary line contrasting with blackish and slate of crown; red eye.

Nest, a semi-pensile basket or pouch, of bark-strips, "hemp," and vegetable fibers, lined with plant-down, and fastened by the edges to forking twigs near end of horizontal branch, five to twenty-five feet up. *Eggs,* 3 or 4, white, with black or umber specks and spots, few in number, and chiefly near larger end. Av. size, .85 x .56 (21.6 x 14.2).

General Range.—Eastern North America, west to Colorado, Utah and British Columbia; north to the Arctic regions; south in winter from Florida to northern South America. Breeds nearly throughout its North American range.

Range in Ohio.—Abundant summer resident, universally distributed.

ONE cannot be sure whether it was the bird's color, or good cheer, or characteristic note, which led Vieillot in 1807 to select for this group the name *Vireo,* a Latin word meaning, I am green, or flourishing. The plumage of this modest "Greenlet" boasts only enough green to enable its owner to lose

itself easily in the foliage of the upper branches; but the voice of good cheer, *Vireo - viree - vireoo*, frequently repeated, is enough, not only to rescue the bird from oblivion, but to immortalize it.

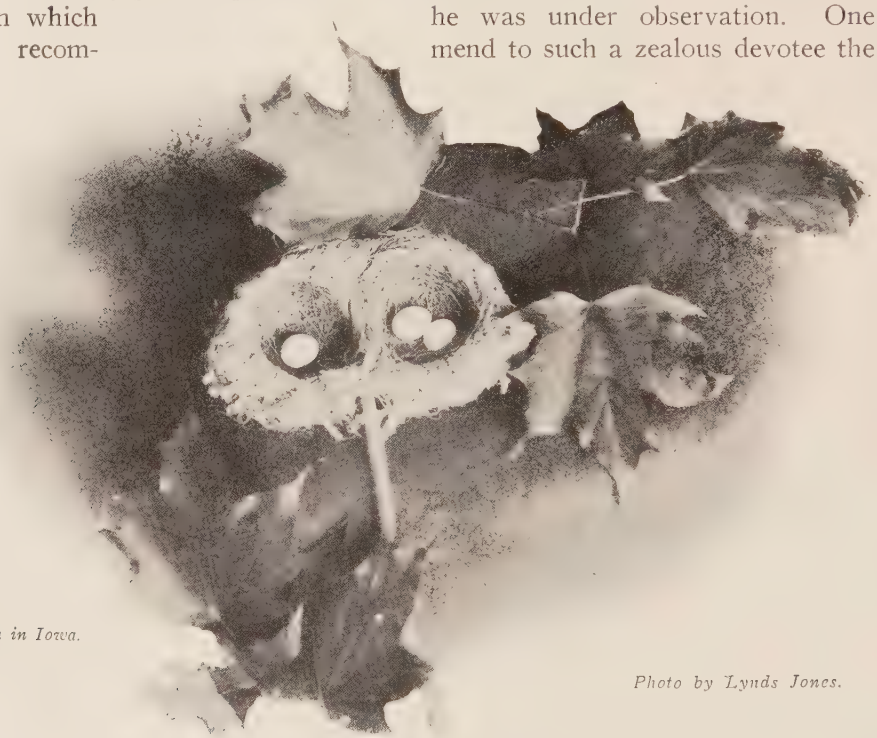
Taken near Elyria. *Photo by the Author.*

"DO YOU HEAR ME? DO YOU BELIEVE IT?"

The Red-eye does occasionally make itself heard in isolated pasture elms and among the shade-trees of the city, but its normal range is in the deeper woods and groves. Here it moves in a leisurely manner from bough to bough, examining critically each leaf and bud, or making little sallies after insect prey. Its soliloquizing notes are often uttered—always in single phrases of from two to four syllables each—while the bird is busily hunting, and serve to mark an overflow of good spirits rather than a studied attempt at song. There is about them also an interrogative character which Wilson Flagg has paraphrased, "You see it—you know it—do you hear me?—do you believe it?" "The Preacher" not infrequently enforces his homilies by hopping down slowly from the tree-tops and bringing the truth home to his hearers. The bird's inquisitiveness is often his salva-

tion, for those which linger at greater heights are often indistinguishable from Warblers of unknown rarity, and their occasional diffidence is much deplored by those who shoot in haste and repent at leisure.

The Red-eyed Vireo is an indefatigable singer, and when he really gives attention to it, as when the mate is sitting, he produces a quantity of sound little less than astonishing. One bird to which I once listened at midday had chosen for his station the topmost bare twig of a beech tree a hundred feet from the ground, and from this elevated station, he poured out his soul at the rate of some fifty phrases per minute, and without intermission during the half hour in which he was under observation. One could recommend to such a zealous devotee the



Taken in Iowa.

Photo by Lynds Jones.

A DOUBLE NEST OF THE RED-EYED VIREO.[1]

BOTH THE MALE AND THE FEMALE WERE SITTING WHEN FOUND.

Chinese fashion of writing prayers (or songs) upon the rim of a wheel, and attaching it to water-power. There would be some time left then for bug-hunting. The bird sings more or less during the entire period of its residence in the north. I heard one two years ago at Columbus singing with undiminished vigor on the seventh day of October, at high noon. The Red-eye's notes are sweet and smooth and clear, higher-pitched and a little more rapid than those of the Yellow-throated Vireo, from which, however, it requires to be carefully distinguished. It has also a comparatively infrequent scolding or

1 By courtesy of *The Wilson Bulletin* this picture appears in advance of its publication by that journal

alarm note, *we-an* or *ye-an,* with the French nasal *"n."* This is delivered about twenty-five times a minute, while the bird holds to one perch without moving, save to sway from side to side or to twist its head rythmically—a sort of nervous relief whose exact function is in doubt.

The nest of this Vireo is a model of neatness, being swung by the brim from the forked tips of horizontal or declining limbs, as in the case of the two species illustrated. The materials used are strips of thin bark, hemp, dead leaves bleached to the color of oxidized silver, and various vegetable downs. The exterior is frequently ornamented with lichens and shreds of cocoons or wasps' nests. Bits of newspaper are always acceptable, and some nests are largely composed of this interesting by-product of civilization.

No. 130.

PHILADELPHIA VIREO.

A. O. U. No. 626. **Vireo philadelphicus** (Cass.).

Description.—*Adult*: Above, dull olive-green over gray, ashy on head; narrow frontal line and area around eye whitish, save for short, dusky line through eye; wings and tail fuscous, edged narrowly with olive-green; no apparent spurious quill; no white wing-bars; first primary shorter than fourth; tip of wing formed by second and third; below everywhere, except on chin, pale sulphur-yellow; sides sometimes buffy or olivaceous; bill blackish above, paler below; feet plumbeous. Length 4.75-5.00 (120.6-127.); wing 1.60 (40.6); tail about 2.00 (50.8); bill from nostril .27 (6.9).

Recognition Marks.—Warbler size; an almost exact counterpart of *V. gilvus,* and known from it positively only by the apparent absence of spurious quill (it having been nearly aborted); it may usually be distinguished, however, by its slightly smaller size, and yellower coloration below, as well as by its more marked olive above.

Nesting.—Does not breed in Ohio. *Nest,* pensile, of grass and birch bark, suspended from fork of horizontal branch eight feet up. *Eggs,* 4, like those of *V. olivaceus* (E. E. Thompson).

General Range.—As yet imperfectly known; eastern North America north to Hudson Bay; south in winter to Costa Rica and Panama. Breeds from Maine, New Hampshire and Manitoba northward.

Range in Ohio.—Probably not uncommon, but little observed, spring and fall migrant.

"NOT very common but regular spring and fall migrant, in May and September. The Philadelphia Vireo is one of the most interesting of the

family, because of its comparatively recent discovery and general rarity. It frequents woodlands and the wooded borders of streams. I have seen a single individual in my garden. In the spring they are found single or in pairs, sometimes in high ash trees, but usually in the branches of undergrowth in beech woodland. In the fall I have found them in flocks, in company with Red-eyed Vireos and Bay-breasted Warblers. Fall specimens are decidedly yellow below. A little acquaintance will enable an observer to determine the species at sight as readily as the family to which it belongs. Its smaller size and olive-green, without marked ashiness of the upper parts, readily separate it from the Warbling Vireo, while the absence of wing-bars as readily distinguishes it from the White-eyed Vireo. So far as I can ascertain they are mute when on their migrations."

Thus Dr. Wheaton writes twenty-five years ago. The birds *must* be not uncommon, since they are known to breed to the north of us through a wide range of country. They are, however, exceedingly inconspicuous, and the only recent appearance which has been noted in Ohio, is that of two birds seen by myself at Columbus, April 22, 1902, on the grounds of the State University.

No. 131.

WARBLING VIREO.

A. O. U. No. 627. **Vireo gilvus** (Vieill.).

Description.—*Adult*: Above, dull ashy, almost fuscous, with the palest possible tinge of olive-green, the latter color brightest on interscapulars, rump, and edgings of secondaries and rectrices; wings and tail fuscous, the primaries with faint whitish edgings; no wing-bars; first primary spurious,—only about a third as long as the others; point of wing formed by third, fourth, and fifth primaries; second shorter than sixth; below white with slight tinges on sides,—buffy on sides of head and neck, olive-fuscous on sides of breast, sulphur-yellow on sides of belly and flanks, and sometimes vaguely on breast; lores and space about eye whitish, enclosing obscure, dusky line through eye; bill dusky above, lighter below; feet blackish. Length 5.00-6.00 (127.-152.4); wing 2.91 (73.9); tail 1.94 (49.3); bill from nostril .30 (7.6).

Recognition Marks.—Warbler size; general absence of positive characteristics,—altogether the plainest-colored bird of the American avifauna.

Nest, a pensile pouch of bark-strips, grasses, vegetable fibers, and trash, carefully lined with plant-down; hung usually from fork of small limb, at any height. *Eggs,* 3 or 4, white, sparingly and distinctly dotted or spotted, or, rarely, blotched

with black, umber, or reddish brown, chiefly at the larger end. Av. size, .75 x .55 (19. x 13.9).

General Range.—North America, in general, from the Fur Countries to Oaxaca, Mexico. Breeds throughout the greater part of its range.

Range in Ohio.—Of general distribution in summer. Perhaps less common southerly.

BOLDLY quitting the woodland retreats, so dear to all the other Vireos, this little warbler makes his home in the long rows of maples and elms which line the streets of village and town, or lead the way to country residences.

Taken near McConnelsville. *Photo by the Author.*

NEST AND EGGS OF THE WARBLING VIREO.

THE NEST WAS BROUGHT DOWN FROM A HEIGHT OF TWENTY FEET TO HAVE ITS PICTURE TAKEN, AND PROMPTLY REPLACED.

Because he is clad in Quaker gray there is little need for the singer to show himself, so he remains for the most part concealed in the dense foliage, but he opens here for the passer-by a cool fountain of song, which is doubly refreshing for its contrast with the dusty turmoil of the street below. Unlike

the disconnected fragments which the Red-eye furnishes, the song of the Warbling Vireo is gushing and continuous, a rapid excursion over pleasant hills and valleys. The notes are flute-like, tender, and melodious, having, as Chapman says, "a singular alto undertone." All hours of the day are recognized as appropriate to melody, and the song-period lasts from the time of the bird's arrival late in April until its departure in September, with only a brief hiatus in July.

In sharp contrast with the beautiful canzonettes which this bird showers down from the tree-tops, come the harsh, Wren-like scolding notes, which it often delivers while searching through the bushes, and especially if it comes across a lurking tabby-cat.

The Warbling Vireo's cradle is swung where its after life is spent—in the depths of a shade tree. The structure is a little the neatest of them all, being closely woven of grasses and fine bark-strips, and felted more or less compactly with vegetable downs. The female is a close sitter, sticking to her post even tho nearly paralyzed with fear. The male is usually in close attendance and knows no way of discouraging the inquisitive bird-man save by singing with redoubled energy. He takes his turn at the eggs when the wife needs a bit of an airing, and even, it is said, carries his song with him to the nest.

The Vireos are frequent victims of the Cowbird. The birds seem to realize the imposition that is being practiced upon them, but are not able to eject the foreign egg. Sometimes a false bottom is constructed to hide the bastard product, and sometimes the tainted nest is deserted outright. One such I found which contained only a single Cowbird's eggs, and that punctured by the outraged Vireo.

No. 132.

YELLOW-THROATED VIREO.

A. O. U. No. 628. **Vireo flavifrons** Vieill.

Description.—*Adult*: Above and on sides bright olive-green, giving way posteriorly to bluish ash; wings and tail blackish; conspicuous white edgings all around on the inner quills and outer rectrices; edging of primaries narrow, whitish, or olivaceous; that of inner tail-feathers whitish or bluish white; two conspicuous white wing-bars formed by tips of middle and greater coverts; no apparent spurious quill; first primary longer than fourth; tip of wing formed by

second and third; chin, throat, and breast bright yellow (canary); a ring around the eye and a supraloral line of the same color; a dusky spot in front of the eye; belly and remaining under parts pure white or sordid; bill and feet black. Length 5.50-6.00 (139.7-152.4); wing 3.00 (76.2); tail 1.93 (49.); bill from nostril .32 (8.1).

Recognition Marks.—Warbler size; yellow breast; white belly.

Nest, pensile, of interwoven strips of bark, plant-fibers, etc., lined with fine grasses, and usually covered with lichens; depending from forked branch ten to forty feet up. *Eggs,* 3 or 4, white, with a roseate tinge, marked with dots and spots of umber, black or reddish brown, chiefly about larger end. Av. size, .83 x .61 (21.1 x 15.5).

General Range.—Eastern United States north to Ontario and Manitoba; south in winter to Colombia. Breeds from Florida and the Gulf States northward.

Range in Ohio.—Common during migrations; locally common or rare during breeding season.

THIS species is evidently the least known of our four resident Vireos. It is a bird of handsome and striking appearance, but while it is occasionally seen in orchard or shade trees about town, it is nearly confined to the woods, and those, too, in rather out-of-the-way places. It is decidedly a bird of the upper levels and seldom ventures down as do its kinsmen to inspect the passer-by.

The song of the Yellow-throated Vireo, because of its varied character, is almost hopelessly confusing. Usually it differs from that of the Red-eyed chiefly in having rough-edged notes, in briefer phrases, and in being less hurried in delivery, altho uttered with great asperity. Rev. J. H. Langille says: "It keeps well up in the tops of trees, diligently gleaning as it sings, *vireo, vireo-ee, wee-ree,* etc., in tones rather shrill for a Vireo, and not nearly so finely modulated and fluent as those of its relative the Red-eye, but greatly resembling them." Chapman says: "If the Red-eyed Vireo is a soprano the Yellow-throat is a contralto," but the note of the latter has a shrill quality which serves to disguise the somewhat lower pitch. I have heard a song—and seen the singer too—which was continuously sustained for long stretches, and which differed from that of the Warbling Vireo only in its greater variety and strength.

If the song is somewhat puzzling there need be no uncertainty with reference to the bird's scolding note, or choleric tirade, *zee, tzu tzu tzu tzu tzu tzu tzu,* becoming rapid at first and then slowing down; or else plain *tzu tzu tzu tzu tzu tzu tzu* with exceeding rapidity at the start and a rallendo finish. It is a nutmeg-grater cry like the House Wren's, but on a larger scale.

The nest of this Vireo is similar in construction and position to those of the other species. It is perhaps a little bulkier than most, and is often

highly ornamented, almost concealed, by mosses and lichens. Some authorities place it at a height of from five to twenty or thirty feet, but I am inclined to the opinion that many nests may be found at a much greater height. The males assist regularly in the duties of incubation, and they have a suicidal habit of singing on the nest.

No. 133.

BLUE-HEADED VIREO.

A. O. U. No. 629. **Vireo solitarius** (Wils.).

Synonym.—SOLITARY VIREO.

Description.—*Adult*: Crown and sides of head clear, bluish ash; eye-ring and supra-loral line white; remaining upper parts olive-green; wings and tail blackish, with whitish or olive-green edgings; tips of middle and greater coverts white, forming two conspicuous bars; spurious quill about one-fourth as long as others; second quill shorter than fifth; point of wing formed by third and fourth; below white, purest on chin and throat; the sides heavily washed with greenish yellow or olive-green, the color reaching sometimes nearly across the breast; bill and feet black or blackish. Length 5.00-6.00 (127.-152.); wing 2.95 (74.9); tail 2.18 (55.4); bill from nostril .29 (7.4).

Recognition Marks.—Warbler size; a large, clearly-marked species, best known by its blue cap enclosing white eye-ring, and its white throat.

Nesting.—Not yet positively reported from Ohio. *Nest,* a pendulous basket of usual Vireo construction, but sometimes decorated externally with moss and lichens, placed in forks of horizontal branch, five to fifteen feet up. *Eggs,* 4 or 5, white with scattering dots and spots of red or reddish brown. Av. size, .81 x .62 (20.6 x 15.8).

General Range.—Eastern United States to the Plains, north to Hudson Bay and Fort Simpson. South in winter to Guatemala. Breeds from southern New England and the northern parts of the Lake States northward.

Range in Ohio.—A common spring and fall migrant. Suspected, but not known to breed in northern part of state.

IT is a thankless task to compare the several beauties of birds so modest as the Vireos, but certainly when it comes to plumage nothing could be more chaste, more decorous, and pleasing withal, than the dainty blues and whites of *V. solitarius.* It is principally by his costume that we know him, for he is usually silent during migrations, and sings only in the northern tier of counties, or, in a moment of forgetfulness, by the wayside. Blue-headed

BLUE-HEADED VIREO
Vireo solitarius
$\frac{3}{5}$ Life-size

Vireos are abundant during Warbler time and are generally to be found high in the trees, keeping company with the equally silent Olive-backed Thrushes, or pausing to admire the tiny manœuvers of their Warbler friends. This is not their habitual range, however, and those which venture down into the lower branches or move about among the shrubbery appear to be much more at home. While with us the bird is deliberate in its movements and gives no sign of the vivacity which characterizes the resident species.

The only song I have heard during the migrations was comparable to that of the Red-eye, but the component phrases had only one or two syllables each, and were slower, softer, and weaker in character. This performance evidently does not truly represent the bird's vocal powers, for Bradford Torrey says of it: "The Solitary's song is matchless for the tenderness of its cadence, while in peculiarly happy moments the bird indulges in a continuous warble that is really enchanting. It has, too, in common with the Yellow-throat, a musical chatter—suggestive of the Baltimore Oriole's—and a pretty trilled whistle."

No. 134.

WHITE-EYED VIREO.

A. O. U. No. 631. **Vireo noveboracensis** (Gmel.).

Description.—*Adult*: Above bright olive-green, duller on cervix; brighter on forehead and rump; wings and tail dusky, with bright edgings of olive-green; two yellowish white bars formed by tips of middle and greater coverts; spurious quill nearly half as long as second primary; second shorter than sixth; point of wing formed by third, fourth and fifth; below white or sordid; sides and flanks washed with bright yellow; lores and a ring around eye bright yellow; bill and feet dark; iris white,—hazel in young. Specimens differ chiefly in the yellowness or sordidness of under parts. Length 4.50-5.25 (114.3-133.3); wing 2.45 (62.2); tail 1.92 (48.8); bill from nostril .28 (7.1).

Recognition Marks.—Warbler size; yellow lores and eye-rings and yellow sides; yellowish white wing-bars, as distinct from *V. gilvus,* which it nearest resembles in point of size; white irises.

Nest, of usual Vireo construction, suspended from forked twigs, three or four feet high in underbrush or thickets. *Eggs,* 3 or 4, white, dotted sparingly with reddish brown or dark purple. Av. size, .76 x .56 (19.3 x 14.2).

General Range.—Eastern United States west to the Rocky Mountains.

north to southern New England and Minnesota; south in winter from Florida to Guatemala and Honduras. Breeds from Florida and the Gulf States northward.

Range in Ohio.—Common in southern, rare in central Ohio. Reported regularly from northeastern part of state (Cuyahoga and Ashtabula Counties).

THE manners of this "well-connected" bird have evidently suffered through close association with that "prince of mountebanks," the Yellow-breasted Chat. Like the larger mime the Vireo frequents brushy ravines and thickets at the edge of the woods, where he prowls and pries and practices all the tricks of the lightning change artist, and is ready at any time to join his voice in a volley of abuse levelled at the chance intruder. If you are not apprised of his presence by a sharp click heard in the depths of the thicket, the feathered *farceur* will mount a nodding wand and throw the succession of vocal somersaults which he calls his song. *Tup to wee-o, chipiti burtuck,* comes with surprising energy and distinctness from so small a throat and you are ready to follow at once upon the chase to which the wary bird invites you.

Mimicry is the White-eye's specialty. He follows it not only from a desire to be tuneful but from sheer love of mischief. Once, in Lawrence County, we heard a remarkable succession of sounds coming we knew not whence. The ravine was full of birds and we surmised Chat and Catbird and Mockingbird, until we came at last upon the center of attraction. A White-eyed Vireo was hopping to and fro upon a willow branch and singing vociferously while birds of half a dozen other species were ranged about him giving rapt attention,—among them a jealous Catbird, who listened with bill agape and drooping wings.

Taken in Morgan County. *Photo by the Author.*

"THE WHITE-EYED VIREO BUILDS LOW."

The punchinello paused from time to time to think up new combinations while the audi ence shifted uneasily. Then he would break out with a new pro duction, a jumble of three or four phrases from different ar tists, and this he would repeat over and over with slight mod ifications at intervals of four or five seconds. The Chat note, a nasal *aoun*, was a favor-ite preface, but we recognized also Towhee, Summer Tanager, Song Sparrow, Catbird, Caro lina Wren, English Sparrow,

Taken in Morgan County.

Photo by the Author.

NEST AND EGGS OF THE WHITE-EYED VIREO.

Wood Thrush, and Warbling Vireo, in the order named.

But while the bird is a good deal of a wag and something of a scold, we are always ready to applaud his humor, and we may as readily condone his "nippy" tongue when we remember that it is wielded in a good cause. The White-eyed Vireo builds low, seldom above seven or eight feet from the ground, and it is naturally anxious for the safety of its eggs or little ones. It is only when the welfare of these is threatened that the bird becomes disagreeable and personal, and not always then.

Taken in Morgan County.

Photo by the Author.

"SAT NICELY FOR HER PORTRAIT."

The nest shown in the near-by illustration was pointed out to me by a friend, Mr. C. H. Morris of McConnelsville. The bird was on but she occupied the center of a little bower which was guarded by a wall of drooping vines and bristling blackberry stems. With fear and trembling I cut an entrance way, removing the stems one by one, and glancing apprehensively at the sitting bird, but she sat on, unmoved. Next, the camera was brought in and advanced by slow stages toward the watchful bird. Many twigs required to be cut away, and there was much flapping of camera-cloths, gesticulating of unmanageable "legs," and clicking of shutters, but the white-eyed beauty sat nicely for her portrait, — once, twice, thrice, until the strain became too great for her. Next the nest and eggs were photographed, and after removing the Cowbird's egg (which appears in the picture just above the nearer rim) the rest were left to be gathered later in the day.

Returning some five hours later, the bird-man pressed eagerly into the copse, intending to collect the set of eggs for a well-known museum. The bird was on and happy now in a new-found confidence. Nearer—nearer—came the collector. The bird sat on. Finally moved by some strange impulse the man brought his face down close to hers, not above a foot away, and gazed wistfully, searchingly, into those trustful eyes. Then that old hard heart of mine melted within me and I turned and fled.

No. 135.

SCISSOR-TAILED FLYCATCHER.

A. O. U. No. 443. **Muscivora forficata** (Gmel.).

Synonyms.—SWALLOW-TAILED FLYCATCHER; SCISSOR-TAIL.

Description.—*Adults*: General color hoary-ash, lighter below, white on throat, darkening on nape, mingling with ochraceous or rusty on back; a concealed scarlet or orange crown-patch; wings fuscous to blackish, with hoary and buffy-gray edgings; first primary deeply emarginate and attenuate; tail deeply forked, the outer pairs greatly produced,—three or four times the length of shortest feathers—the ordinary feathers black, and the longer ones black-tipped, but white or faint salmon-colored for four-fifths their length; a scarlet tuft on the side of the breast; lining of wings, sides of belly, and flanks bright salmon, fading on crissum; bill and feet black. *Immature*: Similar; tail undeveloped; no crown-patch; first primary not emarginate. Length to fork of tail 7.50-8.50 (190.5-215.9); wing about 5.00 (127.); tail 5.00-10.00 (127.-254.); bill .65 (16.5). Females somewhat smaller, and with less developed tails.

Recognition Marks.—Chewink size (comparing body sizes, exclusive of tail); hoary-ash, scarlet and salmon coloration; tail greatly produced, deeply bifurcated.

Nesting.—Does not breed in Ohio. "*Nest,* of sticks, etc., lined with feathers and other soft materials built in trees. *Eggs,* 3-5, .89 x .67 (22.6 x 17.), pure white or creamy white, boldly but sparingly spotted with rich madder-brown and lilac-gray."

General Range.—Texas, Oklahoma, Indian Territory, southern Kansas, southwestern Missouri, south through eastern Mexico to Costa Rica. Accidental in southern Florida (Key West), New Jersey, New England, York Factory (Hudson Bay Territory), etc.

Range in Ohio.—Accidental. One record, by Mr. Frank H. Welder, near Marietta, May 20, 1894.

THIS exceedingly graceful Flycatcher is known to be a great wanderer, but its normal range is confined to Texas, with adjacent territory on the north and south. The species is admitted to our state list on the authority of Mr. Oliver Davie, who reports a single example said to have been taken near Marietta.

The Scissor-tail is so named from a habit it has of opening and closing its elongated tail-feathers like the blades of a pair of scissors. These remarkable appendages may possibly serve the bird as balancers, or brakes, in flight, but a more natural explanation would seem to be that they were provided to enable the owner to work off his surplus energies, and to grace his bold sallies after

insect prey. The birds are rather quarrelsome, especially among themselves. A fight between four or five males such as one observer reports, must be a spectacular affair—equal to one of those other occasions celebrated in the song of their native land, "When dey's razors a'flyin' troo de air."

No. 136.

KINGBIRD.

A. O. U. No. 444. **Tyrannus tyrannus** (Linn.).

Description.—*Adult*: Above ashy black changing to pure black on head, and fuscous on wings; crown with a concealed orange-red (cadmium orange) patch or "crest," the orange feathers black-tipped and overlying others broadly white at base; wings with whitish and brownish ash edgings; tail black, all the feathers broadly white-tipped, and the outermost pair often white-edged; below white, washed with grayish on breast; bill and feet black. *Immature* birds lack the crown-patch, and are more or less tinged with fulvous or buffy on the parts which are light-colored in the adult. Length 8.00-9.00 (203.-228.6); av. of four Columbus specimens: wing 4.60 (116.8); tail 3.31 (84.1); bill from nostril .52 (13.2).

Recognition Marks.—Chewink size; blackish ash above; white below; black tail conspicuously tipped with white; noisy and quarrelsome.

Nest, of weed-stalks, plant-fibres and trash, with a felted mat of plant-down or wool, and an inner lining of fine grasses, feathers, rootlets, etc. *Eggs,* 3 or 4 sometimes 5, white or cream-white, distinctly but sparingly spotted with dark umber and occasional chestnut. Av. size, .98 x .73 (24.9 x 18.5).

General Range.—North America from the British Provinces south; in winter through eastern Mexico, Central and South America. Less common west of the Rocky Mountains. Not recorded from northern Mexico and Arizona.

Range in Ohio.—Common summer resident throughout the state.

STERN republicans that we all are, we nevertheless delight in the tales of ancient tyranny, if only to shudder at them. And surely the fascinating complex of modern international politics would lose full half its charm if there were not half a dozen autocrats to deal with, to flatter, to cajole, to outwit, and secretly to admire. And surely, too, no sane bird-lover would willingly dispense with the presence in our midst of the Kingbird, that arch-tyrant of the winged world. He is King by divine right, if there be such a thing, for he is crowned when he comes of age without any intervention of man. He fairly bursts with self-importance at all times, and the conscientious effort of his ma-

turer years is to enforce his imperium over some chosen domain of bush and field. If he does lord it over the underlings and villeins of his realm it is only that they may humbly acknowledge his sway and applaud him, the self-appointed champion of the defenseless, as he protects

Photo by R. F. Griggs

A YOUNG TYRANT—THE LAST OF THE BROOD.

them from the attacks of all infidel Hawks, Crows, and Jays. Who has not seen him as he quits his high perch in the elm sapling and hurries forward, choking with vengeful utterance, to meet and chastise some murderous Hawk, who before any other foe is brave? Down comes the avenger! The Hawk shies with a guttural cry of rage and terror, while a little puff of feathers scatters on the air to tell of the tyrant's success. Again and again the quick punishment falls, until the tiny scourge desists and returns, shaking with shrill laughter, to give his mate a highly-colored account of his adventure.

When the "King of Rome" was born Napoleon caused a hundred guns to sound. When the twenty-second cannon boomed and the people knew it was a boy, hats flew up and the streets of the gay French capital rang with ap-

plause. This feathered Napoleon has no such spectacular way of announcing the realization of his paternal hopes, but the bird world nevertheless soon guesses the secret. If the tyrant was critical before, he is choleric now; for the whips of discipline he substitutes scorpions. He has the dignity of a whole royal family to maintain. On that glad day he thrashes two Sparrow Hawks and puts a flock of Crows to flight in sheer exuberance of spirits.

It is easily possible, however, to exaggerate the pugnacity of the Kingbird, or to infer from extreme examples that all are quarrelsome. It is not unusual for Kingbirds to be on the best of terms with their immediate neighbors, thieves always excepted. I once found in one small poplar tree the nests of three birds, each containing eggs, viz., a Robin, an Oriole, and a Kingbird. The two latter were within five feet of each other. Dr. Brewer also records an exactly similar case. Kingbird's courage, which is unquestionable, is often tempered by prudence, altho at other times it quite overbalances his better judgment. The Burrowing Owl of the West will tolerate none of his nonsense, and I have seen the birds make sad mistakes in molesting these virtuous mousers. The sight of a Shrike will make a Kingbird shrink into the smallest possible compass. Catbirds, too, are said to be, for valid reasons, quite exempt from their tyranny.

The food of the Kingbird consists entirely of insects, caught on the wing for the most part, by sallies from some favorite perch. His eyesight must be very good, as he not infrequently spies his prey at distances of from twenty to fifty yards. Honey bees form an occasional but inconsiderable article of diet. Both in the taking of food and in the discharge of police duties the Kingbird exhibits great strength and swiftness as well as grace in flight. Once when passing in a canoe through a quiet weed-bound channel near the Muskingum river, I was quite deceived for a time by the sight of distant, white-breasted birds, dashing down to take insects near the surface of the water, and even occasionally dipping under it. They had all the ease and grace of White-bellied Swallows, but proved to be Kingbirds practicing in a new role.

This fondness for the water is often exhibited in the bird's choice of a nesting site. Ordinarily orchard or shade trees, or the more prominent members of neglected hedge-rows are preferred, but on several occasions I have found nests on low-swinging horizontal branches overhanging the water, and thrice, at least, in tiny willow clumps entirely surrounded by it. The nest of the Kingbird sometimes presents that studied disarray, which is considered by some the height of art. Now and then a nest has such a dishevelled appear-

ance as to quite discourage investigation, unless the owner's presence gives the secret of its occupancy away. It is placed usually in an upright or horizontal fork of a tree at a height of from three to forty feet. Twigs, weed-stalks and trash of any kind enter into the basal construction. The characteristic feature of the nest, however, is the mould, or mat, of vegetable plaster, ground wood, and the like, or else compacted wool and cow-hair, which is forced into the interstices of the outer structure and left smooth and rounded inside, giving shape to the nest. This in turn is lined with fine grasses, horse-hair, or variously. Occasionally nests are found composed almost entirely of wool. In others string is the principal ingredient.

Taken on the Licking Reservoir. *Photo by the Author.*

NEST AND EGGS OF THE KINGBIRD.

THE NEST IS PLACED ABOUT TWO FEET UP IN A WILLOW GROWING IN SEVERAL FEET OF WATER.

Eggs are laid at the rate of one each day. Incubation begins when the

nest complement is full, or, more rarely, when the first egg is laid; and is completed, normally in fourteen days. The last week in May or the first in June is the usual time for the first set, and two broods are not infrequently raised in a season.

Although the Kingbird never sings, it has a characteristic and not unmusical cry, *tizic, tizic* (spell it phthisic if you prefer) or *tsee tsee tsee tsee,* in numerous combinations of syllables which are capable of expressing various degrees of excitement and emotion.

No. 137.

CRESTED FLYCATCHER.

A. O. U. No. 452. **Myiarchus crinitus** (Linn.).

Description.—*Adult*: Above, grayish brown washed with olive-green; a short crest not different in color; wings brownish fuscous variegated by edgings,—cinnamon-rufous on primaries, gray or fulvous on coverts and secondaries, greenish yellow, and sometimes broadly white on tertials; tail cinnamon-rufous on the inner webs of all except middle pair of feathers; these and outer webs brownish fuscous; sides of head, throat, and chest ashy gray; the remaining under parts clear, sulphur-yellow; bill dark brown, lighter at bast below; feet blackish. Length 8.50-9.10 (215.9-231.1); av. of five Columbus specimens: wing 4.18 (106.2); tail 3.68 (93.5); bill from nostril .64 (16.3).

Recognition Marks.—Chewink size; ashy, *sulphur-yellow,* and cinnamon-rufous below; crested.

Nest, in holes in trees or posts; a heavy matting of grasses and trash, and invariably including in its composition a cast-off snake-skin; usually at moderate heights. *Eggs,* 3-6, peculiar, creamy brown or buff, with heavy markings and pen-scratching, chiefly longitudinal, of chocolate or purplish brown. Av. size, .90 x .68 (22.9 x 17.3).

General Range.—Eastern United States and southern Canada, west to Manitoba and the Plains; south through eastern Mexico to Costa Rica, Panama and Colombia. Breeds from Florida northward.

Range in Ohio.—Common summer resident throughout the state.

AN outburst of sinister laughter from some distant tree-top in the woods on the 28th or 29th day of April is notice that the Great Crested Flycatcher has come. He is shy at first, but you may catch a glimpse of his warm brown wings as he crosses some skyey space, or of his sulphur breast as he peers down at you from some high limb and reports your progress in excited tones to a still more timid mate. *"Queep, queep, queep*—Look out now, he's coming—*Whecoo,"* and away they scurry to laugh in high discordant notes at their

thrilling adventure. The Crested Flycatcher is the monitor and cynic of the woods. His harsh outcry greets you as you enter the portals of his chosen temple, and he rails at worshipper and priest alike in hollow mocking tones which grate upon the nerves of the would-be devotee. Quarrelsome if not courageous, meddlesome and impudent, the wood-folk are glad when increasing family cares enjoin upon this fretful tyrant a more prudent silence.

Quite unlike other Flycatchers this bird of the cinnamon garb nests in holes in trees. A hollow limb at a moderate height is preferred, but old Woodpecker holes do not come amiss, or new ones either for the matter of that. Orchard trees are often chosen and a convenient knot-hole admitting to the decaying interior will be most eligible. Artificial sites,—bird-houses and the like, have also been used of late years. The hollow, if capacious, is half-filled with trash of every conceivable description,—string, fur, feathers, grass, leaves, and what not. There is only one *sine qua non*:—a cast-off snake skin the bird must and will have, if possible. This, be it noted, is a harsh rustling affair, and is placed almost invariably near the top of the heap, or thrown clear around the rim.

Various conjectures have been advanced to account for this strange taste. Since their nests are often ill-smelling affairs, it has been suggested that the birds really have a weakness for the aroma of the snake, and so provide a convenient smelling bottle to sustain the sitting bird at her weary task. It is well known that a garter snake in spring exhales an odor like wild crab-apple blossoms, but the comparison is not likely to recommend the serpent as a fashionable bouquet. A nest found in Oberlin throws a clearer light upon the problem. A cavity in an apple tree from which a grandmotherly old Flicker had been evicted, was filled half way to the top with tufts of cow-hair and bunches of chicken-feathers, but it contained no snake-skin. Its place was supplied by a crumpled piece of tough tissue paper, which rustled ominously when the hand was inserted. The secret was out. It is the rustle of the snake-skin which either delights the bird, or to which it trusts for giving warning of an enemy's approach during the owner's absence—a sort of burglar alarm, as it were.

Apropos of this curious penchant for snake-skins, Mrs. Blanchan offers a clever conceit to account for the bird's crest. It is from the early fright the youngsters get at discovering a snake in the nest. No snakey; no pompadour!

The eggs are not the least remarkable objects connected with these strange birds. Not only are they more heavily marked than those of any other hole-nesting species, but the color is distributed in longitudinal streaks and pen-scratchings, purplish brown and umber on a creamy buff ground. Among these are interspersed spots and blotches and hair-lines of every degree of deli-

cacy and clearness. It is supposed that the eggs of all hole-nesting species revert to the uncolored form, viz., white, after the lapse of necessary ages,—there being no longer an economic value in color which is to remain unseen. If this be true, then we must conclude that the Crested Flycatcher has only recently hit upon the present method of departure from the family trait of open air nesting. And this is more remarkable because the eggs of the genus *Myiarchus* are more heavily colored than those of any other of the *Tyrannidae*.

The nesting of this species usually takes place in June. From three to six eggs are laid, and incubation is completed in fourteen days. The young are ready to leave the nest at the end of as many days more, and they remain more or less closely associated with the parents at least until the time of the southern journey, which is undertaken during the second or third week in September.

No. 138.

PHŒBE.

A. O. U. No. 456. **Sayornis phœbe** (Lath.).

Synonyms.—PEWIT; PEWIT FLYCATCHER; PEWEE; BRIDGE PEWEE.

Description.—*Adults*: Above, brownish-gray with an olivaceous cast, changing into brownish-dusky on top of head; wings and tail dusky, the former with indistinct bars of brownish-gray and with some lighter olivaceous gray edgings on the secondaries; below, pale sulphur-yellow, or whitish, sordid, and tinged heavily on sides of breast with color of back; bill and feet black. *Immature* birds are rather brighter in coloration than adults, and have more prominent wing-bars. Length 6.75-7.25 (171.5-184.2); wing 3.44 (87.4); tail 2.78 (70.6); bill from nostril .40 (10.2).

Recognition Marks.—Sparrow size; dull olivaceous above, becoming dusky on head; black bill; "*phœbe*" note. To be distinguished from *Contopus virens* by its larger size, less prominent wing-bars, and different bill—the last being longer, narrower, and darker than in the other bird.

Nest, a thick-walled cup or bracket of moss and mud, lined with plant-down, fine grasses and horse-hair; placed upon a beam or projecting corner of out-building, bridge, shale-bank, etc. *Eggs,* 4-6, white, unmarked, or, rarely, sparsely dotted with reddish-brown. Av. size, .80 x .55 (20.3 x 14.).

General Range.—Eastern North America west to eastern Colorado and western Texas, and from the British Provinces south to eastern Mexico and Cuba, wintering from the South Atlantic and Gulf States southward. Breeds from South Carolina northward.

Range in Ohio.—Common summer resident.

THE chilly winds of March may have handed in their resignations, but they have not yet been accepted by the Weather Bureau when Phœbe ventures north. He was feasting on flies in Florida, and would have done well to wait

PHOEBE
Sayornis phoebe
½ Life-size

another month, but that homesickness for old Ohio which her sons and daughters know so well, mastered him, and he could not stay away. Arrived in the old haunts, the pussy-willows nod pleasantly at the venturesome bird, but unfamiliar pools frown icily, and he is obliged to court the shelter of some protecting bank until the purposes of spring are a little stronger grown. Here he utters from time to time a plaintive *tsip* of discontent, or shivers miserably as a fresh blast of Boreas discovers his retreat. Doubtless he recalls on such occasions the bitter irony of the old rhyme, which must have originated in a sunnier land:

Photo by Rev. W. F. Henninger.

PHŒBE'S NEST IN LOG CABIN.

THE NEST CONTAINS ONE EGG OF THE COWBIRD.

"On March the Twenty-first 'tis spring,
When little birds begin to sing;
To build their nests; to raise their brood;
With tender care provide them food."

"Here it is the Twenty-first of March, but where is their spring? Tsip! Nothing but gray skies and a cold wind. Ugh!—and bleary patches of snow! Tsip! It is really too bad! Tsip! Tsip!" But a day or so later the sun shines out and Mrs. Phœbe, more prudent but scarcely less eager, arrives from the south, and the pair set bravely to work nest-building.

Nesting is, of course, the absorbing business of all migrant birds during their summer residence, but in few of them is devotion to the rearing of young, and attachment to a chosen locality carried to a higher degree than in the case of Phœbe. Two or three broods are often raised by these birds in a season, and the same pair will return to a favorite culvert or outbuilding year after year. A recent writer tells of a pair which built nests along the lintel of a door for six successive years, until the place was crowded full of nests in various degrees of preservation.

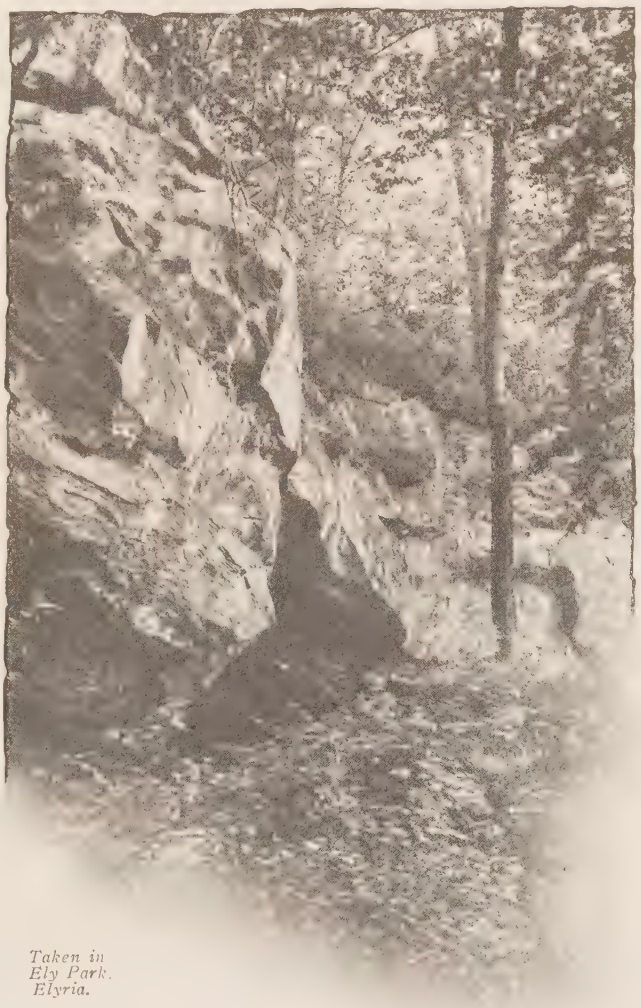
Photo by Rev. W. F. Henninger.

PHŒBE'S NEST IN COFFEE POT.

Formerly Phœbes nested entirely along streams, placing their nest on a convenient ledge of rock jutting out from some moss-covered bank, which was kept damp by the spray of falling water; or else attaching them to the sides of small caves. This habit still persists in many parts of our state, and nests are to be commonly found along shale-cliffs and in sand-stone grottoes or old quarry-holes. But Phœbes have also adopted the ways of civilization, and

the porch, or carriage house, or "lumber shed," boasts no more welcome occupant than this gentle fly-catcher. Bridges, and especially stone culverts, offer a mediate ground between nature and ultra civilization, and of these the birds eagerly avail themselves. One expects at the crossing of every stream, in spring, to see a demure, dusky bird, perched upon the fence-wire where it spans the water, and to hear him say in plaintive but tender accents, *"Pewit, phœbe - phœbe - pewit, phœbe."* Phœbe herself is brooding patiently below, under the cool stone arch, in spite of the thunder of your horse's hoofs.

It would seem as if these birds become perfectly inured to danger of every sort, and especially to noises. The blasting of rock in a quarry-hole is nothing, if only the nest is not dislodged. In several instances I have found occupied nests in railroad culverts; once in an open-topped culvert, and within four feet of passing trains. Less prudent was a bird found sitting in a stone conduit only eighteen inches high, through which a six-inch stream of water flowed. The illustration on the preceding page shows a nest found in an old coffee-pot, which had been left hang-



Taken in Ely Park, Elyria.

Photo by the Author.

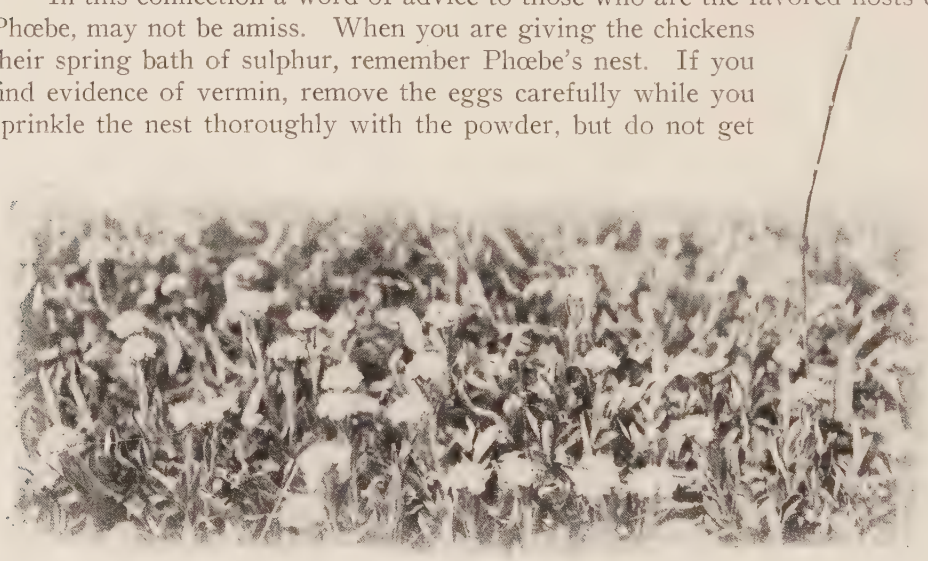
PHŒBE'S CAVE.

THIS LITTLE GROTTO IS THE ONE REFERRED TO IN THE TEXT.

ing on a nail in a deserted cabin. Mr. Henninger was obliged to take the pot down in order to secure a good photograph.

As may be guessed from the catholicity of Phœbe's tastes, many untoward accidents befall during nesting time. Some nests are drowned out; a crumbling ledge or weakening mud-cement causes the downfall of others; while the Phœbe suffers more than most from misplaced confidence in man—or boy. Saddest of all, perhaps, is the annual destruction by parasites. Phœbe's fondness for chicken feathers frequently involves the introduction of chicken-lice into the nest, and these and other vermin make the poor bird's life a burden. Finding cold eggs or desiccated young, one unacquainted with the cause of Phœbe's hardships, is inclined to chide the parent birds for negligence, especially if they be seen at some distance uttering only a feeble plaint; but a careful investigation will exonerate the birds, and let the observer into the secret of their tragic sorrow.

In this connection a word of advice to those who are the favored hosts of Phœbe, may not be amiss. When you are giving the chickens their spring bath of sulphur, remember Phœbe's nest. If you find evidence of vermin, remove the eggs carefully while you sprinkle the nest thoroughly with the powder, but do not get



WHERE PHŒBE CAPTURES THE EARLY FLY.

too much on the inside. Phœbe may not like it at first, but she will lead off six lusty youngsters at the end of the season, and that will be thanks enough. Or in return, you may figure out how many house-flies a pair of Phœbes will catch in a day, working at the rate of two a minute.

An exhaustive list of Phœbe's enemies is not possible or necessary, but a little drama which I once witnessed in the romantic park at Elyria, is at least fruitful in suggestion. While hunting along the side of the steep river bank with two companions, our attention was arrested by the excited "chit-

tering" of a Phœbe, which hovered over a brush pile. A little brown streak flashed out of this pile and into another, and the Phœbe closed in hot pursuit. Round and round a half-raised log they flew—a Winter Wren in terror for his life, and the flycatcher breathing direst vengeance. After a spirited chase, the Wren reached unassailable depths in a large brush heap, and his pursuer made off snapping his beak and panting with rage. Ten rods away we found the Phœbe's eggs in a mossy bracket on the wall of a sand-stone grotto. Would a dear little Winter Wren be mean enough to harm them, or were Phœbe's suspicions unfounded?

No. 139.

OLIVE-SIDED FLYCATCHER.

A. O. U. No. 459. **Nuttallornis borealis** (Swains.).

Description.—*Adult*: Upper parts brownish slate with a just perceptible tinge of olivaceous on back; top of head a deeper shade, and without olivaceous; wings and tail dusky-blackish, the former with some brownish gray edging only on tertials; flank-tufts of fluffy, yellowish or white feathers, sometimes spreading across rump and in marked contrast to it, but usually concealed by wings; throat, belly and crissum, and sometimes middle line of breast, white or yellowish white; heavily shaded on sides and sometimes across breast with brownish gray or olive-brown,—the feathers with darker shafts-streaks; bill black above, pale yellow below; feet black. *Immature*: Similar to adult, but coloration a little brighter; wing-coverts fulvous or buffy. Length 7.00-8.00 (177.8-203.2); wing 4.16 (105.7); tail 2.64 (67.1); bill from nostril .53 (13.5).

Recognition Marks.—Sparrow to Chewink size; heavy shaded sides; bill yellow below; *tew-tew* note; keeps high in trees during migrations.

Nesting.—Not known to breed in Ohio. *Nest,* a shallow cup of twigs, bark-strips, etc., lined with grass and moss; saddled upon horizontal limb of coniferous trees, often at great heights. *Eggs,* 3-5, creamy-white or pale buff, spotted distinctly with chestnut and rufous, and obscurely with purplish and lavender, chiefly in ring about larger end. Average size, .85 x .63 (21.6 x 16.).

General Range.—North America, breeding from the northern and the higher mountainous parts of the United States northward to British Columbia, and the Saskatchewan River. Accidental on the Lower Yukon and in Greenland. In winter south to Central America, Columbia and northern Peru.

Range. in Ohio.—A rare migrant. Only a dozen or so records known.

A familiar resident in the mountains of the West and not uncommon in New England, this large Flycatcher is known to us only as a rare migrant passing to and from its home in the Laurentian highlands. It is not a sociable bird, but migrates in solitary fashion, and roosts high in some scantily clad or dead tree, wherever night may chance to overtake it. At such times it

expresses its distrust of the bird-man, craning his neck from below, by occasional alarm notes of singular resonance and penetrating quality, *tew-tew, tew-tew, tew, tew, tew.* Beside this he has a loud call, *swee-chew,* which is one of the characteristic notes of the dense evergreen forests in which the bird spends its summer. *"Three Cheers,"* he seems to say—as a gold-miner in the Cascade Mountains of Washington once put it. And, truly, for one who has been delving all day in the bowels of the silent earth, the greeting which this bird shouts down from the topmost twig of some giant fir is most welcome and enspiriting.

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No. 140.

WOOD PEWEE.

A. O. U. No. 461. **Contopus virens** (Linn.).

Description.—*Adult*: Upper parts dusky, with a brownish, olivaceous, olive-green, or even grayish cast,—brighter in any case on sides of neck and on back; wings and tail darker; middle and greater coverts tipped with brownish gray, forming two rather noticeable bars; under parts sordid white or yellowish, tinged more or less on sides and sometimes across breast with olive-brown or gray; bill black above, light yellow below, sometimes dark-tipped; feet black. Varies considerably in the matter of olivaceous and yellow coloring, being brighter colored after each moult, viz., in spring and fall. *Immature* birds have some rusty tinging of the feather tips, especially on the wing-coverts. Length 6.00-6.60 (152.4-167.6); av. of five Columbus specimens: wing 3.37 (85.6); tail 2.55 (64.8); bill from nostril .39 (9.9).

Recognition Marks.—Small Sparrow size; obscure coloration; broad bill, yellow below; gray wing-bars; *pe-a-we* note.

Nest, a shallow cup of compacted moss, grass, rootlets, etc., lined indifferently well with grasses, but handsomely decorated externally with lichens; saddled midway or in fork of horizontal limb, at middle heights. *Eggs,* usually 3, sometimes 4, creamy-white, marked by largish spots of distinct and obscure rufous-brown or umber, in open wreath about larger end. Av. size, .71 x .55 (18. x 14.).

General Range.—Eastern North America, west to the Plains, and from southern Canada southward, migrating through eastern Mexico and Honduras to Colombia and Ecuador. Breeds from Florida to Newfoundland.

Range in Ohio.—Abundant summer resident.

WHEN the tide of spring migrations is at its height, and the early morning woods are bursting with melody, a pensive stranger, clad in soberest olive, takes his place on some well shaded limb and remarks, *pé-a-wee,* in a plaintive voice and with a curious rising inflection at the end. Unlike his cousin, the Phœbe, who came too early in March, and who felt aggrieved at the lingering frosts, the Wood Pewee has nothing that he may rightly complain of. The trees are

wreathed in their tenderest greens; the fresh blossoms, opening to the wooing breeze, are exhaling their choicest odors; the air hums with teeming insect life. But the Wood Pewee takes only a languid interest in all these matters. His memory is haunted by an unforgotten sorrow, some tragedy of the ancestral youth, and he sits alone, apart, saying ever and anon as his heart is freshly stirred, *pé-a-wee, pé-a-wee.*

As the season advances, however, the drawling minor notes contrast less strangely with the surroundings. Bobolink's note tinkles distantly from the meadows or is hushed under the weight of increasing family cares. Oriole still flutes, but only spasmodically, and soon we know he too will be silent. When the days reach their full length and the trees can hold not another leaf, then the heart of the olive stranger grows warm. He feels that he has come to his own, and from some ashen limb on the border of a woodsy aisle, his oft-repeated notes blend perfectly with the languorous air. When other birds are silent through the heat of the day, this soothful singer interprets rather than breaks the delicious stillness of the sunlit shades by his gentle inquiry, *pe-a-wee? pe-a-wee?* And then from time to time, lest his quaint interrogation should seem yet too obtrusive, he answers himself with a quainter note of perfect comprehension and content, *ah-péa-wee.*

Altho fond of the deeper woods the Wood Pewee is by no means confined to them. He is even a little partial to the haunts of men if they include orchard and ample shade trees. His whistled notes present an irresistible temptation to imitation, but when he hears his name called by unfamiliar lips he exhibits only mild surprise without resentment.

The nest of the Wood Pewee is one of the most sightly and romantic structures which an ingenious Nature has evolved. Who would not, after the Hang-bird's nest perhaps, choose a home which looked as if it grew upon the very limb which supported it? A rather shallow cup—not a saucer—made of split grass, weed-fibers, delicate strips of grapevine bark, and abundant moss, is settled into the crotch of a lichen-covered horizontal limb, or perhaps it is saddled upon the middle of the limb, even tho it be not over an inch in thickness. In place of cement or vulgar mud, the builders use spiders' silk, the toughest of substances for its size, and delightfully sticky. When the walls are laid, a fairy network of this substance is spread over the outside; and lichens, carefully selected to correspond with those already appearing on the limb, are plentifully used to decorate and conceal the surface. The resulting creation appears like a moss-covered knot where knots are common, and that is all.

But of what use is all this cunning art of decorative concealment, if the proud architects have to go and give the secret away after all? One has only to determine the general vicinity of a Pewee's nest, and then wait quietly at some little distance until the bird flies straight to it. Even when standing beneath the exact spot, the bird, in utter guilelessness or confidence, will settle

upon her eggs with a soft titter of content. But why not? Who could wish to harm so gentle a creature?

In no way do birds exhibit greater diversity of character than in their treatment of intruders. Some will flutter about you savagely when the nest is being examined, and snap their mandibles as tho wishing you were only the size of a horse-fly; others sit at a distance and utter a mournful plaint; while others still disappear from view entirely.

That the Wood Pewee is a bird of spirit the red squirrel can testify. I once saw one of those arch-destroyers trying to make his way along a walnut limb which was evidently forbidden territory. A Pewee had him under fire, and every time his head came round above the limb she set upon him fiercely. If the viciously clicking mandibles did not succeed in finding one of those evil eyes, the flashing fire from the bird's eye must certainly have singed his whiskers. No telling what would have happened had there not been one who intervened.

No. 141.

YELLOW-BELLIED FLYCATCHER.

A. O. U. No. 463. **Empidonax flaviventris** Baird.

Description.—*Adult*: Above dull olive-green, shading on sides and breast into greenish yellow of under parts, the latter shade purest (sulphur-yellow) on belly; wings and tail fuscous; the middle and greater coverts tipped, and the inner quills edged with light greenish yellow or whitish; secondaries abruptly yellow-edged on terminal half of outer webs; tip of wing formed by second, third and fourth primaries; the first shorter than the fifth; a yellow eye-ring; bill dark above, pale below; feet blackish. *Immature*: Similar, but duller above; brighter yellow below; the wing-bands buffy or ochraceous. Length 5.00-5.75 (127.-146.1); av. of ten Columbus specimens: wing 2.67 (67.8); tail 2.02 (51.2); bill from nostril .32 (8.1); width at base .31 (7.9).

Recognition Marks.—Warbler size; general yellowness,—the constancy and strength of the yellow is distinctive.

Nesting.—Not known to breed in Ohio. *Nest,* chiefly of moss, placed on or near ground, in upturned roots, under fallen logs, or in moss-bank. *Eggs,* 4, creamy-white, spotted and speckled, chiefly about larger end, with cinnamon-brown. Av. size, .67 x .52 (17. x 13.2).

General Range.—Eastern North America, west to the Plains, and from southern Labrador south through eastern Mexico to Panama, breeding from the northern States northward. Casual in Greenland.

Range in Ohio.—Probably not uncommon during migrations. Owing to its retiring habits few observers have reported it.

THE *Empidonaces,* or Gnat-kings, (as the Greek name signifies), as a group, offer peculiar difficulties to the student of birds. Altho separated into many species, the distinctions are so fine and the birds in the hand really look so much alike, that their identification is for a long time, in the experience of every one, involved in doubt and confusion. In the West, indeed, where the habitats of these birds are not yet clearly defined, and where the commonest species has earned the name *difficilis* (difficult), the effort to keep up with the little Flycatchers is almost maddening.

The keys to an acquaintance with the four species[1] which occur in our state, are to be found in the notes, or characteristic cries, which each bird utters, and in the character of the haunts which each affects. The species under consideration is the least known of the four. It is found only during migrations, when it is very quiet and very secretive. I have never positively identified it within the state and it appears to be known to only two or three observers. Dr. Wheaton, who was perhaps better acquainted than any one else with the Yellow-bellied Flycatcher, says of its range: "It is seldom found perched near the extremity of limbs watching for or capturing flying insects, but it is generally seen in the midst of a low thicket or fence row, and at the first intimation that it is an object of observation, seeks further concealment by hiding near the ground and remaining motionless. None of the family are such adepts at concealment, its habits in this respect resembling those of the Connecticut and Mourning Warblers."

The ordinary note of this bird is described as "an abrupt *pse-ek,* almost in one explosive syllable," in which case it cannot be so unlike the familiar *cle-otip* note of the Acadian Flycatcher. It has, however, a more distinctive call—"a soft, mournful whistle consisting of two notes, the second higher pitched and prolonged, with rising inflection, resembling in a measure *chu-e-e-p*" (J. Dwight, Jr.). Dr. Wheaton records having heard this longer note on two occasions, but it is rarely heard during the migrations.

No. 142.

ACADIAN FLYCATCHER.

A. O. U. No. 465. **Empidonax virescens** (Vieill.).

Synonym.—GREEN-CRESTED FLYCATCHER.

Description.—*Adult*: Upper parts, olive-green, olive, or olive-gray; wings and tail fuscous; the wing-barring and edging according to the pattern of the preceding species, but not so yellow—rather inclining to buffy or gray; tip of wing

1 For practical purposes the northern refinement *E. traillii alnorum* may be disregarded.

formed by second and third primaries; first longer than fifth; eye-ring, white, or palest possible yellow below; below white, shaded with olive or olive-gray on sides and across breast, tinged with sulphur-yellow on belly (except the middle), flanks, and lining of wings; bill broad, blackish above, pale beneath; feet dark. *Immature*: Like adult, but with ochraceous wing-bars and edgings, and brighter green above, with paler tips of feathers—thus lightening the general effect. Length, 5.50-6.10 (139.7-154.9); wing, 2.87 (72.9); tail, 2.27 (57.7); bill from nostril .37 (9.4); width at base .30 (7.6).

Recognition Marks.—Larger Warbler size; distinctly olive (of some shade) above; throat whitish; yellow-tinged on belly and flanks; *cleotip* note; an inhabitant of woodland, especially beech.

Nest, a frail and shallow saucer of leaf-stems, dried blossoms, or twigs, and rarely, grasses; placed in forklet near tip of declining beech-branch, at a height of from seven to fifteen feet. *Eggs,* 2 or 3 and sometimes 4, creamy-white, sparingly spotted about larger end with rusty-brown. Av. size, .73 x .54 (18.5 x 13.7).

General Range.—Eastern United States, north to southern New York and southern Michigan, west to the Plains, south to Cuba and Costa Rica. Rare or casual in southern New England.

Range in Ohio.—Abundant summer resident. One of the most characteristic birds of our numerous beech woodlands.

"THE groves were God's first temples," and in none of them is worship fitter than in a wood of ancient beeches. The floor of the temple is ribbed with their roots, gnarled and wide-spreading. Plinth and architrave are wanting, but the sturdy beech columns need no excuse save their own rugged grace and their aureoles of living green. Their unfluted sides are frescoed, perhaps, in lichen hues of ashy-

Photo by J. B. Parker

Taken near Danville.

ACADIAN FLYCATCHER—FEMALE BROODING YOUNG.

green and ochrey brown, or else becheckered by the soft sunlight as it comes sifting down through unstained windows. Here a group of tapering pillars, a closer brotherhood, incline in reverence to the whispering breeze, and cast an ample shade for the inner shrine; and here a fallen tree, grown old in service but useful still, invites the worshipper to pause and rest.

In such a sacred spot as this the Acadian Flycatcher has chosen to spend its brief summer. Within the shadow of a single wood it finds its mate, rears young, and gathers strength for the return across the unknown wastes to Florida.

The first notice which we have of the bird's arrival, sometime during the last week in April, is a fairy sneeze heard in the depths of the wood. *"Cleotip,"* it says, but with the time and emphasis of a "Kachew." This note comes not from the tip of some dead limb in full view, as would be the case with other Flycatchers, but from a clear space on some lower limb or middle height. The bird delivers his salutation with a good deal of apparent effort, as tho he were clearing an obstruction from his beak, and he jerks his tail at the same time by way of emphasis. His repertory of song contains no other notes save a low humming titter of adulation, common to the little Flycatchers, and a sharp scolding note, *swew,* or more rarely *sweet,* with a sort of explosiveness at the finish. Altho these are the only notes which I have observed in a somewhat extended acquaintance, one cannot afford to be dogmatic on this subject. As matter of curiosity the following list of interpretations is presented, as culled from seven authors: *Queae, queae, tchoae, tchewee, weet, weet, weet, will; chirr* (Audubon); *quequeal* (Allen); *spee or peet; pee-e-yuk* (Chapman); *e-chee-ah* (Nehrling); *wick-up* or *hick-up; queep-*

Photo by J. B. Parker.

THE TRIUMPH OF MOTHER-LOVE.

ALTHO IN TERROR OF THE CAMERA, THIS MOTHER FLYCATCHER VENTURES TO FEED HER FAMISHING BROOD WHILE HOVERING OVER THEM ON THE WING.

queep or *chier-queer; whoty, whoty* (Bendire); *What-d'ye-see* (Wheaton); *tshee-kee, tshee-kee* (Blanchan). Seven other authorities consulted wisely refrained from the attempt.

It is not altogether unusual to find the Acadian Flycatcher frequenting second growth clearings, and the woodsy borders which face damp brush lots, but he is more commonly found along the umbrageous vista of some unfrequented wood-road, or in the gloomy heart of the forest. Here he waits impatiently for mosquitoes and midges, darting at them suddenly from his perch, making a quick turn at the goal, and bringing his mandibles together sharply with a click which for one poor insect is the veritable crack of doom. Here, too, in some dim aisle of the forest, from the feathery tip of a horizontal or

Photo by J. B. Parker.

ACADIAN FLYCATCHER AND YOUNG.

THE NEST IS THE SAME AS SHOWN IN THE PREVIOUS ILLUSTRATION. GROWN BOLDER THE MOTHER BIRD ALIGHTS ON THE LIMB PREPARATORY TO DIVIDING A MOTH AMONG HER BROOD.

descending branch, a frail cradle is swung. It is a shallow saucer of fine twigs, leaf-stems, or the stalks of some slender vine made fast by the edges to forking twigs or half supported by them. Usually the materials are loosely interwoven and bound together by cobwebs, but the latter are often absent. Catkins and dried blossoms also generally enter into the construction. Occasionally the whole affair is so careless that it merits Dr. Wheaton's comparison, "a tuft of hay caught by the limb from a load driven under it." Beech trees are not the only hosts of this little gnat-king. Dr. Jones says, "I have taken nests from the maple, dogwood, oak, hickory, black-haw, thorn, Indian-arrow, beech, elm, papaw, willow, hazel, and wild grape-vine." To this list must be added the hemlock, a favorite tree wherever it is to be found.

Into the frail saucer three eggs are commonly put. They are of a rich creamy or buffy hue, flesh-tinted as well, when fresh, and boldly but sparingly spotted about the larger end with light brown or umber;—never "white," and seldom unmarked. Many eggs must be lost each season, for any considerable wind would upset them. In fear and trembling I once hooked down a nest at the end of a horizontal oak branch full twenty feet high. The single youngster which it contained appeared, however, to enjoy the ride immensely. If there had been eggs, they could have been counted from below, as in most cases.

The Acadian Flycatcher lays its first eggs before the end of May, and is ready for a second family early in July. It is believed that some thrifty birds raise three broods in a season, but this must be rare.

Considerable fault has been found with the name *Acadian*. It is a misnomer in so far as it is understood to refer to a certain locality in Nova Scotia. The "Green-crested Flycatcher" of the A. O. U. committee is worse yet. It is a revival of the "Small Green-crested Flycatcher" of Audubon and others, but it is inapt. It reminds one strongly of Cuvier and the French Academy. Cuvier once asked the French savants to define a crab. "A crab", said these wiseacres, "is a small, red fish which crawls backward." "Very good, Gentlemen," replied Cuvier, "very good; only a crab is not a fish; it is not red; and it does not crawl backward." If the discontent with "Acadian" cannot be subdued, I would propose a revival of the term *Sylvan*, once employed for several Flycatchers indiscriminately but now fallen into disuse. Sylvan Flycatcher would accurately and appropriately distinguish *Empidonax virescens* in Ohio.

Photo by J. B. Parker.

CLEANING THE NEST.

THE PARENT BIRDS ATTEND TO THIS NECESSARY DUTY AT THE CLOSE OF EACH VISIT TO THE NEST.

No. 143.

TRAILL FLYCATCHER.

A. O. U. No. 466. **Empidonax traillii** (Aud.).

Description.—*Adult*: Above olive, dark olive-green, or olive-brown, *brown of head darker and unmistakable;* wings and tail fuscous; wing-coverts tipped and inner quills margined with grayish (pale buffy or fulvous); pattern of edging on secondaries similar to that of preceding species but less distinct,—yellow not so abrupt, paler, etc.; wing-tip formed by second, third, and fourth primaries; first usually shorter than fifth; below sordid white, tinged on breast and sides with brownish gray, and with a faint wash of sulphur-yellow behind; bill dark above, light brown below. *Immature*: Browner above, more yellow below; wing-bands deep buffy or ochraceous. Length 5.75-6.25 (146.1-158.8); wing 2.84 (72.1); tail 2.22(56.4); bill from nostril .36 (9.1); width at base .30 (7.6). Female not so long, but other dimensions substantially the same.

A VIEW OF THE OAK POINT SWAMPS—A FAVORITE HAUNT OF THE TRAILL FLYCATCHER.

Recognition Marks.—Warbler to small Sparrow size; as compared with the preceding species, a general note of brownness observable; other diagnostic differences not easy, nor individually constant; habits quite different; a dweller in swamps and lowland thickets.

Nest, a rather bulky but neatly-turned cup of plant-fibres, bark-strips, grass, etc., carefully lined with fine grasses; placed three to ten feet up, in crotch of

bush or sapling of lowland thicket or swamp. *Eggs,* 3 or 4, not certainly distinguishable from those of preceding species. Av. size, .70 x .54 (17.8 x 13.7).

General Range.—Western North America from the Mississippi Valley (Ohio, Illinois, and Michigan) to the Pacific and from the Fur Countries south into Mexico.

Range in Ohio.—Locally common summer resident. Found in willows and alders of swamps.

EARLY in June your morning walk along the river bank is likely to be interrupted by an imperative *swee-chee,* issuing from the top of a hackberry sapling hard by. This bird sits uneasily upon her perch and appears anxious, worried. Only dire extremity, you may be sure, could induce her to venture so near this unknown monster, man. *Swee-chee,* she challenges again, and then amazed at her own temerity, vanishes into the thicket to be seen no more. There is a nest near, but the owner has done her duty in proclaiming the fact, and she will not lead further in the search. At about the level of your head in some willow or alder clump, or mayhap in a hackberry like the one upon which she sat, you will find a neat, substantial cup of hemp and grasses, bound tightly to an upright fork. The nest might have been a

Taken at the Licking Reservoir.

Photo by the Author.

A WELL-BUILT CUP.

NEST AND EGGS OF THE TRAILL FLYCATCHER.

Yellow Warbler's, except that it is a trifle bulkier and not so well concealed. It lacks, too, the cotton lining which is indispensible to the Warbler home. The eggs might have been those of an Acadian Flycatcher, but the situation of the nest is entirely different, and its architecture as far removed as Gothic from Maori. Or again the nests of the two species may be happily related by the comparison of cup and saucer. The cup of the Traill Flycatcher is normally two inches across by one and a half deep, inside.

On June 11th, 1901, while walking through a dense clump of swamp elms on the Olentangy levee, I spied a nest of this bird at a height of about ten feet. It was in a delicate situation, but by resting what seemed about one-half of my avoirdupois on an elm sapling, and entrusting the other half to the air, I managed to secure a glimpse into the nest. I saw that it was good. The nest itself was somewhat awry. It had doubtless been planned right in the first place, but the last wind, or the rapid growth of engaging twigs had lifted one side higher than the other. It contained four eggs, three normal and fresh; the other off in every way, except as to size and shape. The egg in question was absolutely unmarked, and bore every evidence of having been exposed to the weather for a great length of time. It was porous with age and the contents perfectly hard. How it might have come into a nest of recent construction along with three fresh eggs I am quite unprepared to say.

Taken at the Licking Reservoir

Photo by the Author

VERY CONFIDING.

THIS LITTLE MOTHER FLYCATCHER APPEARS AGAIN NEAR THE CENTER OF THE NEXT ILLUSTRATION.

Traill's Flycatcher is found only in localities conforming to rather exact requirements. The

bird loves brushy swamps and lowland thickets. In a suitable swamp of a few acres it may abound, so that one writer has stated, rather extravagantly, that it nests in colonies. On the other hand it may be entirely wanting for miles

Taken at the Licking Reservoir. *Photo by the Author.*

A HOME IN THE ELDERBERRIES.

A FEMALE TRAILL FLYCATCHER IS SEEN SITTING ON HER NEST AT A POINT NEAR THE CENTER OF THE PICTURE.

around. Altho nests of this species have been frequently found of late, comparatively little systematic work has been done upon its life history. The bird reaches Ohio about the second week in May (Columbus, May 5th, is an early record, possibly of *E. t. alnorum*), raises one brood and disappears early in September. Authorities differ, as usual, in the interpretation of the notes: *"Whit-te-ar"*, and later in the season *"Hoyt-te-ar"* were what Dr. Wheaton heard. An energetic *swee-chee* or *swee-chu* suits most. An early migrant at Columbus once startled me with a most emphatic enunciation, *Zweé-bew* and once again *zweé-bew, zweét.* This bird was evidently not *E. hammondi,* but he had acquired the precise accent of the western species.

No. 144.

LEAST FLYCATCHER.

A. O. U. No. 467. **Empidonax minimus** Baird.

Synonym.—CHEBEC.

Description.—*Adult*: Above, olive, olive-green, or rarely, olive-brown; a little darker on the head; wings and tail fuscous; tip of wing formed by third and fourth primaries; second equal to the fifth; first shorter than the sixth; wing-bars ashy white or brownish gray; pattern of secondaries about as in *virescens,* but edging ashy white instead of yellowish; below, dull white, shaded on sides by brownish gray, and behind faintly with sulphur yellow; eye-ring whitish; bill dark above, horn-color below,—not so light as in the other species. *Immature*: Similar, but rather more yellow below. Length 5.00-5.50 (127.-139.7); wing 2.46 (62.5); tail 2.03 (51.6); bill from nostril .31 (7.9); width at base .29 (7.4).

Recognition Marks.—Least, Warbler size; *chebec* or *sewick* note, smartly rendered. Size and note distinctive.

Nest, a neat structure of interwoven grasses, bark-strips, and felted vegetable-down, lined with hair, or occasionally, feathers; placed in upright or horizontal fork of sapling five to fifteen feet up. *Eggs,* 3-5, white, unmarked, or rarely, speckled. Av. size, .63 x .50 (16. x 12.7).

General Range.—Chiefly eastern North America, west to eastern Colorado and central Montana; south in winter to Central America. Breeds from the northern States northward.

Range in Ohio.—Common spring and late summer migrant. Locally and sparingly resident in summer.

IN comparison with other *Empidonaces* a good many superlatives are applicable to this bird in addition to that of least. In the first place he is the earliest of the spring migrants, reaching central Ohio some time during the last week of April or even earlier. Then he is the most prominent, for he

almost invariably selects a conning tower on some naked or dead limb which commands a wide sweep of mosquito territory. He is the least timid, or perhaps we would better say he is the most confiding of his race. Conscious of right motives himself, he is slow to think evil of others, and does not hesitate to occupy a convenient station from which he may observe your business with pleased interest, while not forgetting his own. Then if you are not ready to admit that he is the dearest bird, it must be conceded that he is a little the noisiest member of a group in which this distinction is easy and not unflattering. *Sewick—sewick,* or as some prefer to hear it, *che-bec,* sounds frequently in a very business-like tone of voice from the tip of the dead branch which serves the bird as a base of operations.

The drooping wings and a general air of dejection which distinguish this little Flycatcher at rest, are promptly contradicted both by the energy of the bird's utterance, and by the spirited sorties which are made after passing insects. Sometimes a whole host of midges is encountered and then the little mandibles go snip, snip, snip, like barbers' shears in skillful hands.

There is also an ecstatic flight cry, which occurs either as the result of the excitement of rivalry or the chase, or as a tender passage in courtship, and which almost lays claim to being considered song. During its delivery the bird rises from its perch, flutters its wings rapidly and turns around slowly in the air, while it utters an incoherent series of screaming gasps: *Sewick, tooral, sewick tooral, sewick, tooral-ooral.*

The Least Flycatcher is to be found almost anywhere during the spring migrations, but orchards, second-growth clearings, and brushy hillsides are favorite places. The up-trip is made in rather leisurely fashion, and the birds sometimes linger long enough to encourage the idea that they are going to nest. Mr. I. A. Field saw two of these birds at the Licking Reservoir on May 30th, and Professor Johnson of Granville believes that a pair of them have nested for several years past in front of his house.

If the nest is discovered in the state, as it is altogether likely to be, it will be found in an upright fork of some bush or sapling, a very neat structure built somewhat after the manner of a Redstart's; and the pure white eggs will make identification easy and certain.

The return journey takes place early in September or late in August. It is, however, an open question whether birds seen August 24th, 1902, in Meigs County, were early migrants or summer residents.

No. 145.

RUBY-THROATED HUMMINGBIRD.

A. O. U. No. 428. **Trochilus colubris** Linn.

Description.—*Adult male*: Above shining bronzy green,—rear aspect golden-green; wing-quills fuscous with faint purplish reflections; tail (two thirds concealed by green coverts), dark, metallic violet or purplish, forked, and with emarginate feathers; gorget shining metallic crimson; chin dull, velvety black; throat, below gorget, whitish; remaining lower parts heavily tinged with dusky and overlaid with metallic green, save on flanks, which are cottony-whitish; bill slender, straight, and uniformly rounded. *Adult female*: Similar but without gorget; throat white, specked with dusky; tail double rounded, feathers rapidly tapering near tip. *Immature male*: Like adult female, but tail forked. *Immature female*: Like adult, but throat not specked with dusky. Adult male, length 3.25-3.60 (82.6-91.4); wing 1.53 (38.9); tail 1.08 (27.4); bill .63 (16.). Female a little larger.

Recognition Marks.—Size least among Ohio birds.

Nest, of plant-down, bound together by vegetable-fibers, and decorated externally with lichens; a tiny cup saddled upon a horizontal or descending limb, usually at considerable heights. *Eggs,* 2, pure white. Av. size, .51 x .34 (13. x 8.6).

General Range.—Eastern North America to the Plains, north to the Fur Countries, breeding from Florida to Labrador; and south in winter to Cuba, Mexico and Veragua.

Range in Ohio.—Common summer resident.

THOSE of us, who as children were taught to call lady-bugs "lady-birds," might have been pardoned some uncertainty as to the whereabouts of the dividing line between insects and birds, especially if, to the vision of the "Humbird's" wings shimmering by day above the flower bed, was added the twilight visits of the hawk-moths not a whit smaller. The Hummer is painted like a butterfly; its flight is direct and buzzing like a bee's; it seeks its food at the flower's brim by poising on rapidly vibrating wing like the hawk-moth; but there the resemblances cease. For the rest it is a bird, migrating, mating, and nesting quite like grown folks.

It is a matter of no little wonder that of the five hundred species of Hummingbirds known to science and confined to the New World, only one should have penetrated the region east of the Mississippi River, there to enjoy a range almost twice larger than that of any other species. How we came to be so nearly overlooked we may never know; but let us be thankful for one.

Contrary to the popular belief the Hummer does not feed largely upon nectar, but inserts its needle-bill into the depths of flowers mainly for the purpose of capturing insects. This explains the otherwise puzzling habit the bird has of revisiting the same flower beds at frequent intervals. It is not to

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RUBY-THROATED HUMMINGBIRD
Trochilus colubris
Life-size

gather new-flowing sweets but to see what flies the sweets themselves have gathered. If the bird extracted honey to any great extent—it does some—it would be rifling the bait from its own traps. Again the bird is not footless, as some suppose, but it spends a good deal of time perching on exposed limbs, from which it may dart, Flycatcher fashion, after passing insects.

I am almost inclined to deny the report also that this tiny creature is songless. For in addition to the squeaks of excitement or anger, which all have heard, have we not seen an impetuous gallant dashing through the air in great rainbow mazes, before his lady love, demurely seated; and have we not heard him giving cry to a perfect ecstacy of chippering and suckling notes of such exquisite fineness that the human ear could only catch the crests of sound? Song is a relative term, to be sure; but to accuse the Hummingbird of being voiceless, is a bit of injustice. Ask the lady.

Hop-o'-my-Thumb has, I am sorry to say, a flashing temper to match his throat. Rivals charge at each other with an impetuosity which makes us fearful that they will be spitted on each other's beaks. Other birds a hundred times the size must sometimes suffer from the little tyrant's spleen, but to see a Hawk cross the sky by jerks and plunges in a vain effort to avoid this tiny persecutor is not a wholly unedifying sight.

The Hummingbird is full of curiosity and not, perhaps, without some sense of humor. Else why should one of them down in Washington County have hovered for full twenty seconds in mock uncertainty within eighteen inches of the author's nose? It was only honest sunburn, and I resent the bird's insinuation.

The fairy's nest is commonly saddled to an obliquely descending branch of an orchard or forest tree. It is a tiny tuft of vegetable down bound together and lashed to its support by a wealth of spider webbing and covered externally with lichens. When finished it is nothing more than an elfin bump on a log, but the unwary visits of the mother discover a secret otherwise profound. She sits upon two eggs like homeopathic pills—so dainty, indeed, that she herself must needs dart off the nest every now and then and hover at some distance to admire them. Both parents are valiant in defense of the nest, but the practical support of the little family seems to fall chiefly upon the mother. The young are fed by regurgitation—"a frightful looking act," as Bradford Torrey says.

No. 146.

CHIMNEY SWIFT.

A. O. U. No. 423. **Chætura pelagica** (Linn.).

Synonym.—CHIMNEY SWALLOW (incorrect).

Description.—*Adult*: Entire plumage sooty brown or sooty gray, darker, almost black, on wings, much lighter on throat; feathers of upper parts with faintest possible greenish iridescence; lores black; the shafts of the tail-feathers extending beyond the vanes, forming black spines one-quarter to one-third of an inch in length; point of wing formed by first and second primaries; the remaining wing-quills strongly and uniformly graduated in length; bill very small; feet weak. Length 4.75-5.50 (120.6-139.7); wing 5.00 (127.); tail 1.90 (48.3); bill from nostril .16 (4.1); gape 1.00 (25.4).

Recognition Marks.—Apparently "Swallow" size; abbreviated tail; semi-lunar appearance of wings in flight; general black aspect. Never seen at rest save in chimneys or hollow trees.

Nest, a shallow half-saucer of short twigs, glued together with the bird's saliva and similarly cemented to the inside wall of a chimney, or placed in a hollow tree. *Eggs,* 4-6, pure white. Av. size, .80 x .51 (20.3 x 13.).

General Range.—Eastern North America north to Labrador and the Fur Countries, west to the Plains, and passing south of the United States in winter, at least to Jalapa, Mexico, and Cozumel.

Range in Ohio.—Abundant summer resident.

THE way of any bird in the air commands interest, but the way of the Swift provokes both admiration and astonishment. With volitatorial powers which are unequaled by any other land bird, this avian missile goes hurtling across the sky without injury, or else minces along slowly with pretended difficulty. Now it waddles to and fro in strange zigzags, picking up a gnat at every angle, and again it "lights out" with sudden access of energy and alternate wing strokes, intent on hawking in heaven's upper story. At favorite seasons the birds cross and recross each other's paths in lawless mazes and fill the air with their strident creakings, while here and there couples and even trios sail about in great stiff curves with wings held aloft. It is the only opportunity afforded for personal attentions, and it is probable that the sexes have no further acquaintance except as they pass and repass in ministering to the young.

The most interesting hour in the life of this bird is bed-time. All the birds in a given locality resort nightly to some high chimney or ventilator shaft, —the larger the better. Even during the breeding season the males congregate regularly in these places and thither the young are hurried as soon as they have attained adolescence. After sunset, then, the company gathers for a social whirl in the air above their long black bunk. Under leadership which seems haphazard, they gyrate furiously, now appearing like specks borne about resistlessly in some vast whirlpool, now following through some intricate evolution in figure-

CHIMNEY SWIFT
Chaetura pelagica
¾ Life-size

RIGHTS

of-eight or rosette pattern, all without collision or accident. No bird is more loth to go to bed, but as the evil hour draws near and conscience pricks the tender-hearted, a few approach the chimney top with quivering wing. But at sight of the yawning hole they recoil in terror, and rejoin the mad whirl above, circling seven times faster for the fright they have had. But something really must be done; the music languishes; one and another and another braves the depths, and returns no more. Soon there is a general movement and whole squads go down. The young bloods spur up the dance with renewed fury, but the light is fading and the end is near. When the waltz is over a few late comers dive into the hole without loss of time. All is still, at last, and darkness broods over the scene. Thus has the bird-man seen them a thousand strong.

Getting up in the morning is more prosaic. At about 4:30 A. M. (on a morning late in August) some unquiet spirits who have slept outside, enter the chimney and arouse the sleepers. A general exodus soon occurs, but there is no repetition of last night's gaities. In leaving the chimney the birds do not hurl themselves upward, as one might expect, but flutter quietly to the top, and upon reaching the brim fly straight away or else downward. When many are leaving at once this action curiously resembles that of smoke on a windy day.

In nesting the Chimney "Sweeps" seek out the smaller chimneys of dwelling houses, and usually only one pair occupies a single shaft. Short twigs are seized and snapped off by the bird's beak in midflight, and these, after being rolled about in the copious saliva, are made fast to the bricks, a neat and homogeneous bracket being thus formed. This will be sufficient to support the half dozen crystal white eggs and the hissing squabs which follow, unless a premature fire or a long-continued rain dissolves the glue and tumbles the fabric into the grate.

Sitting birds, when discovered, oftenest drop below the nest and hide, clinging easily with the tiny feet supported by the spiny tail. The male bird seldom pays any attention unless there are young, in which case he even brushes past the intruder and enters the nest in his eagerness to share the hour of danger. The young are rather slow in development and it requires, according to Mr. Otto Widmann, two months to rear a family of them. Usually only one brood is raised, but a second nesting is undertaken even as late as August if the first has proven unsuccessful.

Of course the Swift did not always place the nest in chimneys. Dr. Howard Jones says: "Sometimes it is built in a hollow trunk of a tree, under the eaves of a house, or upon a rafter in a barn, but the last two locations are very exceptional. Before the days of chimneys the nests were placed almost exclusively in hollow trees, and even today there are some birds which cling to this ancestral habit. About two miles east of Circleville on Darby Creek,

is a gigantic sycamore, which, a century or so ago, was topped by the wind. In the trunk of this tree, which is hollow to the roots, Chimney Swifts have built for years. There are other hollow trees in the neighborhood, into which I have also seen birds carrying sticks; and if all such trees in the state could be counted, they would probably foot up hundreds, or, perhaps even thousands."

No. 147.

WHIP-POOR-WILL.

A. O. U. No. 417. **Antrostomus vociferus** (Wils.).

Synonym.—NIGHT-JAR.

Description.—*Adult male*: Mottled,—black, gray and ochraceous of several shades—in intricate patterns and soft blendings; a narrow collar and the terminal third of three outer pairs of rectrices white, the former margined, and the latter tipped with ochraceous-buff; crown and nape finely mixed gray, with narrow lateral, and broad medial black streaks; the wings much mixed with ochraceous-buff, which is nearly pure in spots on outer webs of dusky primaries; four median tail-feathers gray and dusky, indistinctly barred, and with ochraceous mottling; the lateral feathers chiefly blackish, and with large white terminal bands; below nearly black on throat above collar, and across breast; lighter on belly and sides, obscurely barred with dusky in wavy outlines on pinkish buff, fulvous, or ochraceous ground; bill with enormous gape and protected by stout, undivided rictal bristles, an inch or so in length, and seven or eight in number on a side. The bristle idea is carried out by numerous hair-like tips of the feathers which border the throat on the sides and meet the bristles above. Feet a little stouter than in preceding species. *Adult female*: Similar, but with narrow ochraceous-buff, instead of broad, white terminal bands on outer tail-feathers; collar more extensively tinged with buffy. *Immature*: Pattern of upper parts somewhat different; plainer below. Length 9.50-10.00 (241.3-254.); wing 6.16 (156.5); tail 4.73 (120.1); gape 1.28 (32.5); bill from nostril .30 (7.6).

Recognition Marks.—Robin size; general mottled and brindled appearance; crescentic white collar; prominent rictal bristles; *no white wing-spot.*

Eggs, 2, laid on the ground or among dead leaves, in damp woods or thicket; elliptical, dull white or creamy, with spots and dots or sometimes blotches of yellowish brown, and with obscure lilac shell markings. Av. size, 1.16 x .86 (29.5 x 21.8).

General Range.—Eastern North America to the Plains, and from latitude 50° south to Guatemala.

Range in Ohio.—Not uncommon summer resident, but locally restricted.

AS one is picking his way late in April through a low damp wood, choked with underbrush, a dark figure suddenly rises from the dead leaves at his feet, uttering a low disconcerted *chuck*, but moving off with wings of

ghostly noiselessness, only to drop down into the brush again a rod or so away. It is almost idle to search for it with the eyes alone, so perfectly do the softly blended colors of the Whippoorwill's plumage assimilate to those of the leaf-strewn mold. On other occasions the bird may be seen resting on some low limb or fence-post, and twice during migrations I have seen it high in trees in broad daylight, squatting lengthwise of a dun-colored limb.

Whippoorwills are crepuscular and nocturnal in habit, and secure their insect prey by flying to and fro across bushy pastures and swampy meadows. The bird's enormous gape, seconded by the lengthy bristles on either side of the beak, makes the pursuit about as artless as that of the entomologist, who sweeps the tops of the weeds with a mosquito - netting bag, "catching as catch can."

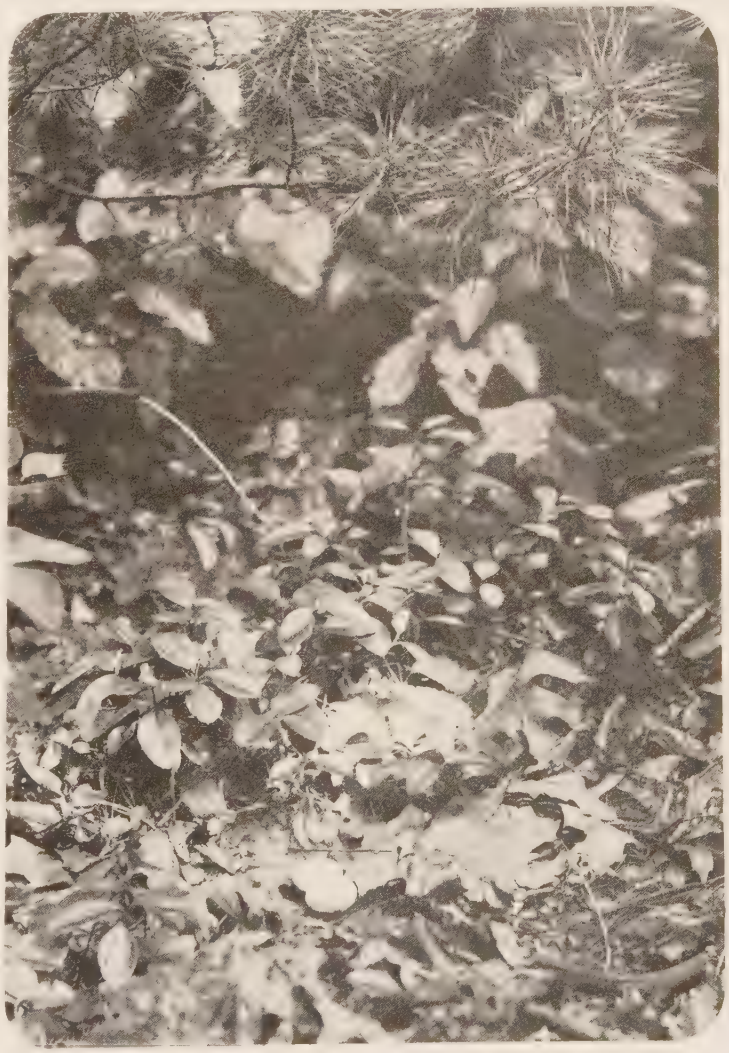

Photo by R. F. Griggs.

THE WHIPPOORWILL'S NEST.

These nocturnal fly-catchers are rather irregular in their distribution about the state. They are likely to appear almost anywhere during migrations; but for a breeding haunt

prefer broken country where wooded ravines and damp brushy hillsides abound. I have seen half a dozen of them near Columbus and presume they breed in some of the "runs." Chance Creek, a deep ravine in Lorain County, once pine-clad, was the only spot where we could be sure of finding them for miles around.

It was here that I once listened to a concert which stands out in memory like the singing of Patti. A small party of us, reunited classmates, were crossing, at dusk, the high tongue of land between Chance Creek and Vermillion River, when we heard the sweet notes of a Whippoorwill, *whip-poor-will, whip-poor-will,* wafted up from the glen below. Soon the bird was joined by another whose presence seemed to provoke the first to redoubled effort. The mellow notes were produced in a continuous series by each performer, and a third chimed in, as we stood and listened to the intoxicating music, in that tender fresh hour after sunset. After a time the bird-man ventured to imitate their cries by whistling, and soon obtained a hearing. The birds answered eagerly at frequent intervals. Then came a long hush, followed by a sudden sense of the birds' presence, as they glided silently by, almost brushing my wife's garments with their quiet wings. They took up a station near and poured forth such a flood of liquid notes as made the air quiver and vibrate with the gushing melody, and bathed our world-worn spirits in a grateful stream of limpid absolution. Awed and hushed the bird-man could not emulate those glorious strains, and the trio retired in gentle confusion.

The periods of greatest activity in song are the hours just after sunset and those preceding dawn, but the cries may be heard at all hours of the night as the bird pauses from time to time to rest.

The eggs, which are not quite white, as one might suppose them to be from the photograph, are laid upon the fallen leaves or bare rock, without any attempt at nest construction. The parent bird sits close as long as possible, or feigns lameness in the event of danger; and she has also a hissing note meant to repel attack. The eggs or young must be studied, if at all, the hour they are discovered, for in the absence of the observer, the bird will remove them—by the mouth it is said—to a place of safety.

No. 148.

NIGHTHAWK.

A. O. U. No. 420. **Chordeiles virginianus** (Gmel.).

Synonym.—BULL-BAT.

Description.—*Adult male*: Mottled, black, gray and ochraceous, and with white in patches; above black predominates, especially on forehead and back, mottling falling into indistinct bars on upper tail-coverts and tail; anterior edge of wing white; the wing-quills dusky; a large, white, transverse patch about midway on the first five primaries, save on the outer web of the first; a large V-shaped throat-patch white; remaining under parts distinctly and finely barred, dusky and whitish with some faint ochraceous,—the latter found especially on the parts adjacent to the white throat-patch; the crissum sometimes pure white, usually barred, at greater intervals than on breast; a white band crossing tail near tip, except on central feathers. Bill without evident bristles, the horny part very small, but length of gape about an inch. Tarsus very short; the middle claw enlarged, and with a curious, horny, comb-like process on the inner edge. *Adult female*: Similar, but without white band on tail, and with white spots on primaries often much reduced; throat-patch tinged with ochraceous, and suffusion of under parts by this color more pronounced. *Immature*: More finely and heavily mottled than adults, and with upper parts more heavily marked, or even suffused with ochraceous-buff. Length 9.00-10.00 (228.6-254.); wing 4.85 (123.2); tail 4.32 (109.7); bill from nostril .21 (5.3).

Recognition Marks.—To appearance "Little Hawk" size—really smaller; central white spot in long wing distinctive.

Eggs, 2, deposited on the bare ground, often among rocks, sometimes upon a flat rock, or on the gravel roof of a tall building; grayish white, or dull olive-buff marbled, mottled, or clouded and speckled with various shades of olive, and brownish- or purplish-gray. Av. size, 1.18 x .86 (30. x 21.8).

General Range.—Northern and eastern North America west to the Great Plains and central British Columbia, and from Labrador south through tropical America to the Argentine Republic.

Range in Ohio.—Not very common summer resident. Abundant during migrations, especially in August. Breeds sparingly throughout the state but is subject to great local variation.

CURIOSITY is certainly a large element in the make-up of most birds. Scarcely had I set my foot outside my door this August morning, when I caught sight of a young Nighthawk which had alighted for the day on a prominent bare limb of an oak, at a height of not less than sixty feet. But I was not the first discoverer. Half a dozen Bluebirds were hovering about the stranger and talking excitedly. Red-headed Woodpeckers cackled and scolded and exclaimed "Queer! Queer!" diving viciously by way of emphasis, at the unoffending night-bird. Blue-gray Gnatcatchers, Baltimore Orioles, and Flickers joined the mob, wagging their heads and chattering as they

passed up surmises to their motley companions. They all agreed it was a *What-is-it?* and I did too; for the bird was so brown, or tawny, and showed so little of the distinctive white spot on the wings, that it took all the morning to determine that it was really a young Nighthawk and not a Whippoorwill.

Both of these birds suffer somewhat from an unreasoning prejudice on the part of both birds and men, occasioned perhaps by their long wings. I have seen Robins pounce upon an unoffending Whippoorwill, and drive the poor bird nearly distracted; while everybody knows that the very name

Taken near Delaware. *Photo by E. L. Scott.*

NIGHTHAWK'S EGGS, IN SITU.

"hawk," however unreasonably applied, is enough to explode the cap on any self-sufficient old musket.

These Nighthawks are perfectly harmless except to moths, midges and their ilk; and their uplifted wings half careened by the evening breeze, furnish one of the most pleasing adornments of meadow and pasture. The birds "quarter the air" in a bat-like flight of irregular zigzags, often pouting as they go, *Mizard—mizard.* They are not so strictly nocturnal as the Whippoorwills, but put a liberal construction on "twilight," being careful to avail themselves of all dark days, and, in fact, moving about at will whenever the sun slants fairly. During the mating season the males take great parabolic

headers in the air, returning sharply and producing a loud booming *daw-w*, —whether by the rushing of the air through the wings or across the open mouth will perhaps never be determined.

While the Nighthawk prefers open situations, and is not found much in heavily timbered regions, it takes readily to the life of the city, because of the abundance of insects there afforded. In Columbus it is a familiar feature, hawking fearlessly above High Street, and nesting, as in many other cities, upon the tarred and gravelled roofs of flat-topped buildings. During migrations scores of these birds are sometimes seen moving aloft in loose array, and customarily, at this season, silent. Locally they never appear to be so abundant as in the West, where I have seen several hundred gathered to gyrate in social fashion within the limits of a single pasture.

The eggs of the Nighthawk are more heavily colored than those of the Whippoorwill, as becomes their more exposed situation. The young birds place great reliance upon their protective coloration, and even permit the fondling of the hand rather than confess the defect of their fancied security.

No. 149.

HAIRY WOODPECKER.

A. O. U. No. 393. **Dryobates villosus** (Linn.).

Description.—*Adult male*: Above, in general, black,—glossy, at least on crown and cervix, dull on tail, fuscous on wings; a narrow, scarlet band on the nape; white superciliary and rictal stripes, separated by a black band through eye, continuous with nape; a black malar stripe, broadening behind; white nasal tufts; a lengthened white patch on middle of back; wing-coverts spotted with white,—a round blotch on the tip of each; wing-quills and primary coverts white-spotted on each web, the blotches on the outer webs confluent in bars on the closed wing; tail black centrally, the two outer pairs of feathers white on exposed portions, the third pair white-tipped and tinged with rusty; entire under parts soiled white; bill and feet light plumbeous. *Adult female*: Similar, but without scarlet band on hind neck. "*Young* with the crown mostly red or bronzy or even yellowish" (Coues). Length 8.50-9.50 (215.9-241.3); wing 4.63 (117.6); tail 3.31 (84.1); bill 1.13 (28.7).

Recognition Marks.—Chewink size; black and white above (male with red band on hind neck), and soiled white below; rattling call notes.

Nest, in a hole excavated in tree, usually in dead portion, unlined. *Eggs,* 4-6, white. Av. size, .94 x .73 (23.9 x 18.5).

General Range.—Northern and middle portions of the United States from the Atlantic Coast to the Great Plains.

Range in Ohio.—Common throughout the State. Resident.

WE naturally associate our resident Woodpeckers with winter weather, partly because the removal of the foliage causes them to stand out in bold relief, and partly because the unfailing character of their food-supply makes them in a measure free from the depression of spirits usually incident to the season. The Hairy Woodpecker, especially, is often in high spirits when the air is frosty. He has spent the night deep in the heart of some forest tree, at the end of his winter tunnel, and now he crosses a half-wooded pasture with great bounds of flight, shouting, *plick, plick,* from time to time; and he gives a loud rolling call—a dozen of these notes in swift succession—as he pulls up in the top of a dead tree to begin the day's work.

In the search for hidden worms and burrowing larvæ, it seems not improbable that the Woodpecker depends largely upon the sense of hearing —that he practices auscultation, in fact. A meditative tap, tap, is followed by a pause, during which the bird apparently marks the effect of his strokes, noting the rustle of apprehension or attempted escape on the part of the hidden morsel. It is not unusual for the bird to spend a half hour in tunneling for a single taste, and even then the wary game may withdraw along some tunnel of its own even beyond the reach of the bird's extensible tongue. But beside that which must be secured from the bowels of the wood, there is much to be gleaned from the surface and in the crannies of the bark. The winter fare is supplemented also by cornel berries and the fruit of certain hardy vines.

The Hairy Woodpecker visits the winter troupes only in a patronizing sort of way. He is far too restless and independent to be counted a constant member of any little gossip club, and, except briefly during the mating season, and in the family circle, he is rarely to be seen in the company of his own kind.

The nests of this bird are usually situated well up in the forest trees. Beech trees are likely to be dead at the top, even when they interpose a thrifty screen of foliage below, and afford, therefore, an ideal situation. The bird, however, sometimes ventures into town and takes up quarters in a shade tree, or in the orchard, or even in a fence-post. Incubation is attended to in May and but one brood is raised in a season. These Woodpeckers are exceptionally valiant in defense of their young, the male in particular becoming almost beside himself with rage at the appearance of an enemy near the home nest.

DOWNY WOODPECKER
Dryobates pubescens medianus
Life-size

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No. 150.

DOWNY WOODPECKER.

A. O. U. No. 394c. **Dryobates pubescens medianus** (Swains.).

Description.—*Adult*: A miniature of the preceding, and with the same distinction between the sexes. In the present species the white of the nasal tufts encroaches upon the forehead, and is continuous with the superciliary line; the wing coverts are more numerously white-spotted; and the outer tail-feathers are barred with black; the under parts sometimes exhibit a faint buffy suffusion. Length 6.25-7.00 (158.8-177.8); av. of five Columbus specimens: wing 3.75 (95.3); tail 2.57 (65.3); bill .66 (16.8).

Recognition Marks.—Sparrow size; like preceding species but much smaller, bill only a little more than half as long; *pink* or *pimp* note.

Nest, in holes of rotten stubs or decayed limbs, unlined, usually at moderate heights. *Eggs,* 4-6, white. Av. size, .75 x .59 (19.1 x 15.).

General Range.—Middle and northern portions of eastern United States and northward.

Range in Ohio.—Common,—about three to one of the preceding species. Resident.

DOWNY is one of the most familiar and confiding of birds. Almost without suspicion, he is still full of curiosity, and is one of the first birds to come up when the call of the Screech Owl is sounded by the bird-man. One place is about as good as another for his trade, so when the Cardinals and Juncoes have retired in disgust, having thoroughly exposed the shameless trick, Downy still lingers, tapping industriously along the smaller branches of some near-by tree, or studying the intruder through a maze of dreamy content. This little Woodpecker is one of the most frequent visitors in orchard and garden. He will begin at the bottom of an apple tree and work around it, ascending spirally, and then follow out one branch after another, until it would seem that he had exhausted about every possibility of insect-egg or hidden worm in connection with that tree. The holes which he digs are either prospect shafts or mining tunnels, whose sole object is the golden worm. The little miner, therefore, does no injury to the live wood, and confers incalculable benefits upon the orchard by the destruction of its real enemies.

Downy is one of the most devoted members of the winter troupe. His loyalty to this organization is at times almost pathetic. When the bird-man comes up, the Juncoes move away in a huffy manner; Major Titmouse admonishes the younger members of the family to be on their guard; and there is a general edging away that is not flattering to the visitor. The Downy Woodpecker is the last to leave, and does so apologetically, as tho he were chagrinned at the unexpected rudeness of his friends. Again, when the Juncoes and the Goldfinches insist upon pushing out into the open, Downy

follows and flits along the fence from post to post as long as he can keep his friends in sight, or else he takes to the mullein stalks himself.

In moving from place to place Downy gives a characteristic *pink,* and less frequently a rattling call, which is an exact imitation of that of the Hairy Woodpecker. It is at times difficult to distinguish either the single notes or the longer calls, but while the notes of the smaller bird are usually much less in volume and strength, they have a rather more nasal quality. All Woodpeckers have also a sort of signal system, or Morse code, consisting of sundry tattoos on resonant wood. These calls are used principally, or

Photo by the Author.

WHEN DOWNY FREEZES HIS TOES.
ONE OF THOSE HEAVY HOAR FROSTS WHICH MADE THE WINTER OF 1902-3 MEMORABLE IN CENTRAL OHIO.

exclusively, during the mating season, and consist in the case of the Downy of six or seven taps in regular and moderate succession.

Nesting is at inconsiderable heights, and both sexes assist in excavation and incubation. Partially decayed wood is selected, and an opening made about an inch and a quarter in diameter. After driving straight in an inch or two, the passage turns down and widens two or three diameters. At the depth of a foot or so the crystal white eggs are deposited on a neat bed of fine chips. Incubation lasts twelve days, and the young are hatched about the first of June. According to Dr. Jones a second brood is sometimes brought off in July.

No. 151.

RED-COCKADED WOODPECKER.

A. O. U. No. 395. **Dryobates borealis** (Vieill.).

Description.—*Adult male*: Crown and hind neck glossy black, continuous across lores with malar stripe which is produced behind, breaking up on sides of breast into heavy black spots; auriculars broadly silky white, bordered above narrowly and posteriorly with bright scarlet "cockades"; touches of white on nostrils, at base of lower mandible on sides, and over and behind eye; remaining upper parts brownish dusky, heavily spotted and cross-banded with white; tail blackening, the outer feathers irregularly barred with white; under parts white, immaculate on chin and throat, elsewhere sordid; heavily spotted with black or dusky on sides of breast, sides, flanks, and crissum; bill bluish black, small for size of bird. *Adult female*: Similar but without scarlet cockades. Length 8.00-8.50 (203.2-215.9); measurements of the Columbus specimen: wing 4.80 (122.); tail 3.23 (82.); bill .86 (21.8).

Recognition Marks.—Chewink size; intermediate between Hairy and Downy; narrow scarlet stripes (1-3 of an inch long by 1-10 broad) on sides of hind head distinctive.

Nesting.—Does not breed in Ohio. *Nest*, in hole of pine tree at considerable heights. *Eggs*, 4-6, white. Av. size, .93 x .69 (23.6 x 17.5).

General Range.—The south-eastern United States, west to eastern Texas and Indian Territory, north regularly to Virginia and Tennessee, casually to Pennsylvania (Coues) and Ohio.

Range in Ohio.—One record, Columbus.

A specimen, found by Professor Hine, in the O. S. U. collection, bears the following label, in the well-known hand-writing of Dr. Jasper: Obverse —"Picus borealis. Red Cockated (*sic*) Woodpecker. March 15. 1872. Loc. Columbus, O."; Reverse.—"It was in company with another of its own kind and 2 or 3 Sapsuckers, Nuthatches, etc., and shot from a high tree between Canal and Scioto Rivers."

The appearance recorded above marks the northernmost extension of the species. The bird was evidently trying to do something to justify the name *borealis*, so unwisely bestowed upon it by Vieillot in 1807.

"This species is a common inhabitant of the 'piny woods.' It prefers the higher branches of the trees, and frequently hangs head downward while feeding on a cone at the extremity of a branch. Its call note suggests the *yank, yank*, of the White-bellied Nuthatch, but is louder, hoarser, and not so distinctly enunciated" (Chapman).

No. 152.

ARCTIC THREE-TOED WOODPECKER.

A. O. U. No. 400. **Picoides arcticus** (Swains.).

Synonym.—Black-backed Three-toed Woodpecker.

Description.—*Adult male*: Above black, lustrous on head, crest, back and scapulars, fading to fuscous on wing-quills, which are narrowly white-spotted on the outer webs of the primaries and on the inner webs of the secondaries; an orange-yellow patch on the center of the crown; of the tail only the central feathers wholly black, the remainder graduated, and white on exposed portions, the intermediate pairs rusty-tipped; a white stripe on side of head meeting its fellow on forehead; below this a black malar stripe; under parts pure white, save as heavily barred with black on sides and flanks; bill and feet light plumbeous. *Adult female*: Similar, but without orange-yellow crown-patch. Length 9.25-10.00 (235.-254.); wing 5.00 (127.); tail 3.54 (89.9); bill 1.38 (35.1); breadth at nostril .43 (10.9).

Recognition Marks.—Robin size; lustrous black without white on back; white with black-barred sides below; the orange-yellow crown-patch of male serves to distinguish from all resident species.

Nesting.—Does not breed in Ohio. *Nest*, in holes in trees, at moderate heights. *Eggs*, 4-6, white. Av. size, 1.00 x .75 (25.4 x 19.1).

General Range.—Northern North America, from the Arctic regions south to northern United States (New England, New York, Michigan, Minnesota and Idaho), and in the Sierra Nevada to Lake Tahoe.

Range in Ohio.—Rare or casual. Two positive records.

SINCE this species is migratory, we may regard the two or three birds which have been found in Ohio as migrants which have overflown their customary southern limit, somewhere in Ontario.

"It is a restless, active bird, spending its time generally on the topmost branches of the tallest trees, without however confining itself to pines. Its movements resemble those of the Red-cockaded Woodpecker, but it is still more petulant than that bird. Like it, it will alight, climb along a branch, seek for insects there, and in a very few moments remove to another part of the same tree, or to another tree at more or less distance, thus spending the day in rambling over a large extent of ground. Its cries also somewhat resemble those of the species just mentioned, but are louder and more shrill, like those of some quadruped suffering great pain. . . . . In the afternoon of long days, it very frequently makes sorties after flying insects, which it seems to secure in the air with as much ease as the Red-headed Woodpecker. Besides insects it also feeds on berries and other small fruits.

"Its flight is rapid, gliding, and deeply undulated. Now and then it will fly from a detached tree of a field to a considerable distance before it alights, emitting at every glide a loud shrill note. . . . .

"The nest of this species is generally bored in the body of a sound tree, near its first large branches. I observed no particular choice as to timber, having seen it in oaks, pines, etc. The nest, like that of other allied species, is worked out by both sexes and takes fully a week before it is completed, its usual depth being from twenty to twenty-four inches. It is smooth and broad at the bottom, altho so narrow at its entrance as to appear scarcely sufficient to enable one of the birds to enter it. . . . . Only one brood is raised in the season. The young follow their parents until autumn, when they separate and shift for themselves." . . (Audubon).

A recent writer, Mr. James H. Fleming,[1] says also: "This Woodpecker has a habit of sometimes nesting in colonies. I saw the nests of such a colony near Sand Lake in 1896; there were six or seven nests, each cut into the trunk of a living cedar, just below the first branch, and usually eight or ten feet from the ground. The cedars were in a dense forest, overlooking a small stream that empties into Sand Lake. Four eggs seem to be the full set. The young are hatched by the first of June."

No. 153.

YELLOW-BELLIED SAPSUCKER.

A. O. U. No. 402. **Sphyrapicus varius.** (Linn.).

Description.—*Adult male*: Forehead and crown crimson-red, bordered narrowly on both sides and broadly behind with glossy black; chin and throat crimson, bordered with black on both sides, continuous with a broad, glossy black pectoral-patch; a black band beginning at eye and running obliquely downward to join black of scapulars, separating two white stripes, one starting from the eye and meeting its fellow on the nape, the other starting from nostril and joining lower breast; remaining upper parts black and white in longitudinal patches, and black-and-white cross-barred; a central dorsal and scapular patch glossy black, another dead black, formed by primary coverts, and continued obliquely backward by basal black of primaries; lesser, middle, and greater coverts white on exposed webs, forming continuous lengthwise patch; remaining portions of back and wings black-and-white-barred or, in case of wing-quills, white-spotted in such a way as to form continuous white bars on closed wing; tail-feathers black except on inner webs of central pair, which are black-and-white-barred; the outer pair, and even second, sometimes exhibit marginal or terminal white in spots; remaining lower parts sulphury-yellow, clear and intense on area adjoining black of breast, clear but paler on middle line of breast and belly; the sides and flanks sordid, heavily streaked or with subterminal V-shaped markings of dusky. Bill and feet dark plumbeous. *Adult female*: Similar, but with chin and throat white instead of red; and red of crown sometimes wanting. *Immature*: Black, white, and red

1 Birds of Parry Sound and Muskoka, Ontario. The Auk, Vol. XVIII, p. 39.

of head and breast entirely wanting, or the pattern faintly indicated by changes in the mottled brownish gray of these parts. Length 8.00-8.75 (203.2-222.3); av. of nine Columbus specimens: wing 4.94 (125.5); tail 3.30 (83.8); bill .87 (22.1).

Recognition Marks.—Chewink size; black breast-patch; red or enclosed white of throat; sulphur-yellow tinge of under parts distinctive.

Nesting.—Not positively known to breed in Ohio. *Nest,* in a hole excavated in tree about forty feet up. *Eggs,* 5-7, pure white, not conspicuously polished. Av. size, .87 x .67 (22.1 x 17.).

General Range.—Eastern North America north to about latitude 63° 30′ (north of Fort Simpson), breeding from Massachusetts northward; south in winter to the West Indies, Mexico and Costa Rica.

Range in Ohio.—Common, sometimes abundant during migrations.

BEFORE the maple sap has ceased running, our woods are invaded from the south by a small army of hungry Sapsuckers. The birds are rather unsuspicious, quiet, and sluggish in their movements. Their common note is a drawling and petulant *kee-a,* like that of a distant Hawk; but they use it rather to vent their feelings than to call their fellows, for altho there may be twenty in a given grove, they are only chance associates and have no dealings one with another. Starting near the bottom of a tree, one goes hitching his way up the trunk, turns a lazy back-somersault to reinspect some neglected crevice, or leaps out into the air to capture a passing insect. The bulk of this bird's food, however, at least during the migration, is secured at the expense of the tree itself. The rough exterior bark-layer, or cortex of, say, a maple, is stripped off, and then the bird drills a transverse series of oval or roughly rectangular holes through which the sap is soon flowing. The inner bark it eaten as removed and the sap is eagerly drunk. It is said also that in some cases the bird relies upon this sugar-bush to attract insects which it likes, and thus makes its little wells do triple service. According to Professor Butler, an observer in Indiana, Mrs. J. L. Hine, once watched a Sapsucker in early spring for seven hours at a stretch, and during this time the bird did not move above a yard from a certain maple tap from which it drank at intervals.

Pine trees also afford a favorite sustenance for this greedy Sapsucker. A certain group of exotic pines, on the State University campus, has suffered from the attacks of this species, possibly of the same individual, for several successive years. Each season the bird, keeping pace with the growth of the tree, attacks a higher section, and reopens the wounds of the previous year. Of course this sort of thing is not be encouraged in orchards or ornamental trees, but the amount of damage done the country over is not serious, and the bird is also a large consumer of insects.

It is difficult to believe that this handsome little Woodpecker, which appears so abundantly the second week in April, and even lingers into May,

does not remain anywhere to nest with us. The species is unique among our Woodpeckers, in that it is strictly migratory, while the Red-head, our only other migratory species, frequently breaks the rules and stays the year around. The Sapsucker may breed northerly, since it is known to do so in Indiana, but no authentic reports have come in for Ohio. It winters casually in the southern part of this state, and has appeared at that season as far north as McConnelsville.

No. 154.

NORTHERN PILEATED WOODPECKER.

A. O. U. No. 405 a. **Ceophlœus pileatus abieticola** Bangs.

Synonym.—LOGCOCK.

Description.—*Adult male*: General plumage sooty black, lusterless save on wings and back; whole top of head and lengthened crest bright red; red malar stripes changing to black behind, and separating white spaces; chin and upper throat white; also a white stripe extending from nostrils and below eye to nape, and produced downward and backward to shoulder; a narrow white stripe over and behind eye; lining and edge of wing, and a large spot (nearly concealed) at base of primaries, white; black feathers of sides sparingly white-tipped; bill dark plumbeous above, lighter below, save at tip; feet black. *Adult female*: Similar, but black on forehead, and black instead of red malar stripes. Length 15.50-19.00 (393.7-482.6); wing 8.50-10.00 (215.9-254.); tail 5.85-7.40 (148.6-188.); head 4.50-5.50 (114.3-139.7); bill 1.75-2.65 (44.5-67.3).

Recognition Marks.—Largest size; black, white and red on head in stripes; body mainly black.

Nest, high in trees. *Eggs,* 4-6, white. Av. size, 1.29 x .94 (32.8 x 23.9).

General Range.—Formerly the heavily wooded regions of North America south of about latitude 63°, except in the southern Rocky Mountains. Now rare or extirpated in the more settled parts of the Eastern States.

Range in Ohio.—Rare and locally restricted. Reported recently from Ashtabula County, Morgan County, lower Scioto, and Little Miami Rivers, etc.

IF the "curse of beauty" be added to that of large size, the destruction of a bird is foredoomed in this age of automatic shot-guns and unappointed game wardens. This magnificent black Woodpecker, once common throughout the heavily timbered areas of our own and adjacent states, has almost disappeared before the industrious axe and the all-conquering gun. The bird has been recently reported only by Robert J. Sim, of Jefferson, and in "Middle Southern Ohio," by Rev. W. F. Henninger. In an interesting communication, to which I am indebted for an account of the bird's habits, Mr. Sim

states that the Pileated Woodpecker is almost always to be found in the vicinity of Jefferson. An extensive area of primeval forest, near at hand, has afforded it asylum for many years past, but the tract is even now being reduced by lumbering interests; and the day of the passing of the Logcock is not far distant.

In the spring of 1902, according to Mr. Sim, a pair of these birds nested within a mile of town. The nesting cavity was dug in a beech tree, at a height of about thirty feet, and within two feet of the broken-off top, and the work was completed by the middle of April. Chips were strewn liberally over the ground below, and many showed the characteristic chisel marks of the bird's powerful bill. During the nesting season the parent birds remained pretty closely in the neighborhood of the home tree, drumming, calling, and searching for food.

"The drumming song is a series of about twelve taps, increasing in rapidity and growing less in strength to the end. It may be heard for a long distance. I have heard this Woodpecker give three *vocal* songs or calls. One is an exultant, ringing laugh given in high clear soprano. The first note and the last are lower and less loud than the rest. At a distance this call sounds metallic; but when at close range it is sent echoing through the forest, it is full and clear, and is the most untamably wild sound that I know among bird-notes. Another call might be suggested by the syllables *cow-cow-cow* repeated indefinitely, but some times intermittently. When two birds approach each other they often carry on a wheedling conversation which is not unpleasant to hear. It seems to be analogous to the *wichew* note of the Flicker, but is given more slowly and has a peculiar quality which would lead one to believe that the birds have their bills closed while making the sound."

In its search for food the Logcock strikes deliberately but with force, often giving the head a powerful twist to wrench off a piece of wood. Sometimes quite a large fragment is thrown back by a toss of the head. Much time is also spent about fallen tree-trunks, where in addition to grubs and other insect larvæ, it subsists largely upon ants.

No. 155.

RED-HEADED WOODPECKER.

A. O. U. No. 406. **Melanerpes erythrocephalus** (Linn.)

Synonym.—TRICOLORED WOODPECKER.

Description.—*Adult*: Head and neck all around and fore breast rich crimson; back, scapulars, and wing-coverts glossy blue-black, and sometimes a narrow, pectoral band of the same color below the red (found only in worn plumages); terminal portion of secondaries (save outer webs of first and second, which are black or black-banded), rump, and upper tail-coverts white; edge of wing, primaries and tail black, the latter variously white-tipped on outer feathers below; remaining under parts, including under wing-coverts, pure white,—sometimes with faint crimson tinge on center of belly; bill dark plumbeous, lightening at base. *Immature*: Quite different; without red, or with only traces of it appearing on auriculars, breast and nape; head, neck, and fore-breast brownish gray, mixed with dusky in fine streaks, or almost uniform fuscous; back and scapulars bluish-black, with ashy edgings, or broadly mottled and indistinctly barred with whitish; exposed portions of secondaries with two or three irregular black bars; below sordid whitish, sometimes streaked with dusky on breast and sides. Length 9.25-9.75 (235.-247.6); av. of eight Columbus specimens: wing 5.40 (137.2); tail 3.22 (81.8); bill 1.05 (26.7).

Recognition Marks.—Robin size; head all around deep crimson; red, black, and white in broad patches.

Nest, a hole excavated in tree, often living, at considerable heights; unlined, *Eggs*. 4-6, glossy white. Av. size, 1.02 x .76 (25.9 x 19.3).

General Range.—United States west to the Rocky Mountains, and north from Florida to about 50°, straggling westward to Salt Lake Valley and Arizona; rare or local east of the Hudson River.

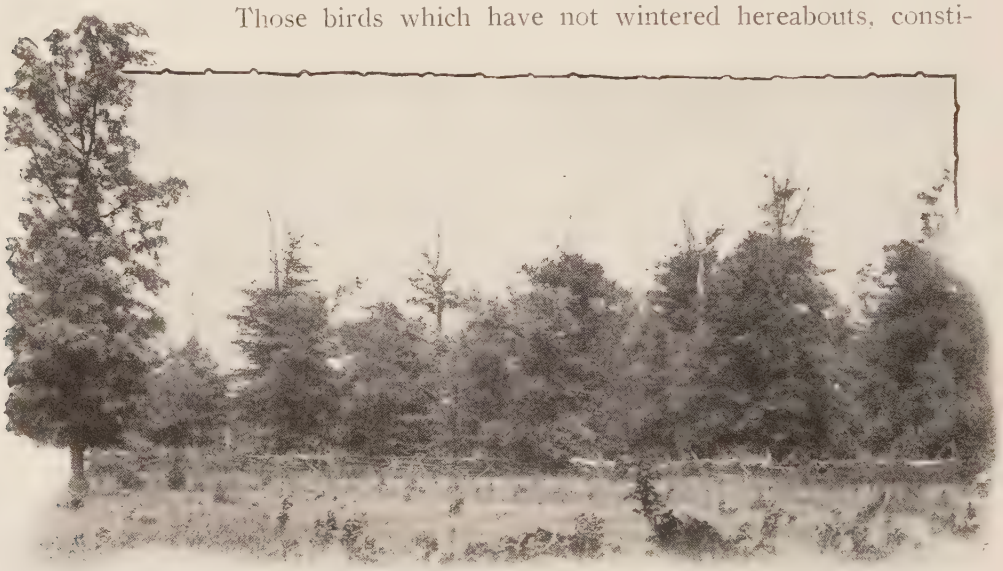
Range in Ohio.—Common throughout the State; abundant in central portion. Winters irregularly everywhere.

OF all our Woodpeckers the Red-headed is the fittest (or at least the most likely) to survive. As if to compensate the bird for its fatal conspicuousness, Nature has made it hardy, thrifty, versatile and pugnacious. The primeval forests were, no doubt, more to the bird's taste, but with their gradual disappearance the wily Woodpecker has thoroughly accommodated itself to the changed conditions, so that it is now almost as much a bird of the open as of the woodland. Telegraph poles and fence-posts offer acceptable nesting sites, so that it may exist in countries almost destitute of timber.

Ability to meet changed conditions depends upon many factors, but chiefly upon food supply. The Red-headed Woodpecker burrows and probes for worms and ants like his congeners, but to this limited fare is added grasshoppers, crickets, and beetles secured upon the ground; flies, wasps, and all sorts of insects taken in mid air, with all the skill, if not quite the grace, of the Fly-

catchers; besides fruits and berries of many sorts, including cherries, apples, and pears, and in fall and winter beech nuts and acorns. This varied fare is not resorted to upon mere compulsion, but it is sought with avidity; so that it is no wonder that the bird thrives in any situation. Whether or not the Woodpeckers will remain through the winter in any given section, seems to depend entirely upon the local crop of beech nuts, or "mast." No mast, no Red-heads, is the clearly proven rule. In case the bird decides to "lie over", nuts and acorns are gathered and stored in crevices and holes against the coming season; and we may suppose that it is a matter of indifference to the bird whether it gets the nut kernels originally deposited, or a transmuted product of weevils and grubs.

Those birds which have not wintered hereabouts, consti-



Taken near Columbus. WOODPECKER ROW. *Photo by the Author*

tuting as they do the great majority, return north from the middle of April to the first of May. Then the woods and groves soon resound with their loud calls, *Quee-o—quee-o—queer.* These *queer* cries are not unpleasant, but the birds are a noisy lot at best. When one of them flies into a tree where others are gathered, all set up an outcry of *yarrow, yarrow, yarrow,* which does not subside until the newcomer has had time to shake hands all around at least twice. Besides these more familiar sounds the Red-heads boast an unfathomed repertory of chirping, cackling, and raucous noises. The youngsters, especially,—awkward, saucy fellows that most of them are—sometimes get together and raise a fearful racket until some of the older ones, out-stentored, interpose.

In selecting a nesting site the birds usually keep to the dead tops of forest trees, such as those shown in the illustration, but from this rule there is almost every conceivable departure. Large dead branches are sometimes chosen, in which case the entrance is made on the under side of the limb. Holes are sometimes dug in living trees, at the cost, of course, of prodigious labor. Telegraph and telephone poles are coming more and more into favor. Dr. Howard Jones once called my attention to a rather small telephone pole standing on his grounds in Circleville, which contained eleven nesting holes, of which three had been used that season, being occupied by Red-headed Woodpeckers, Flickers, and Bluebirds.

Eggs to the number of five or six are deposited late in May, and the young are hatched about the middle of June. In occasional instances two broods are raised. These Woodpeckers are very devoted to their offspring, but according to Dr. Jones, they do not observe the care in feeding the young that is usual with most birds. "In every brood there is one bird older and stronger than the rest, and this one is sure to be on top and get his head to the hole first, when the old ones come with food. Being stronger at the start than his brothers and sisters, and each day getting more food, he gains more strength; and, gaining more strength he gets each day more food. While this double-acting system progresses, the reverse is happening to his mates, until in extreme cases they actually die of starvation, and are not even carried out of the nest by the parents."

THE WOODPECKER.

He's the sassiest critter that ever I see!
An' he sets there a-peekin' an' bobbin' at me,
While he's carvin' a notch in the wind-shaky crotch
O' that moss-covered hickory tree.
Dinged if ever I see such a tormentin' bird!
When I woke up this mornin', the first thing I heard
Was his "rubby-dub-dub" on an ol' holler stub—
'Fore the other fowls twittered 'r stirred.

See 'im set there a-peckin' that worm-eaten limb,
An' a-winkin' at me as I'm talkin' o' him;
While his hard bullet head shinin' glossy an' red
Drives a bill like a thorn, black an' slim.
Seems in teasin' a feller he takes a delight;
An' he'd rather be killed in a one-sided fight,
Than to give up the grub he has found in that stub—
'R to show the white feather, in flight.

He's the beatenest bird—an' he don't care a straw!
W'y, he takes what he wants, without license 'r law,
An' he chatters with fun at the crack of a gun—
While he's fillin' his famishin' craw.
I'll be hanged if I don't kind o' fancy 'im though—
He's so blamed independent an' keerless, you know;
An' I'd feel sort o' bad—an' consider'ble sad,
If he'd mind by complainin' an' go.

Malta, O. *James Ball Naylor.*

No. 156.

RED-BELLIED WOODPECKER.

A. O. U. No. 409. **Centurus carolinus** (Linn.).

Description.—*Adult male*: Top of head, including nasal tufts, and hind-neck bright scarlet; back, scapulars, wing-coverts, and exposed portion of secondaries regularly and strikingly black-and-white-barred; primaries black terminally but with touches of white on both webs toward base; upper tail-coverts white, or slightly barred; tail black,—the two outer pairs of feathers terminally, and the central pair on the inner web, black-and-white-barred; concealed base of central pair white along shaft of outer web; under parts ashy or sordid white, usually with a buffy tinge on breast and belly, red-tinged on circum-ocular region and on center of belly, rarely also on breast; flanks and crissum black-and-white-barred; bill and feet dark plumbeous. *Adult female*: Similar, but crown broadly ash, separating red areas on forehead and nape. *Immature*: Similar to adults, but duller colored; buff instead of red-tinged on belly. Length 9.00-10.00 (228.6-254.); av. of eleven Columbus specimens: wing 5.27 (133.9); tail 3.18 (80.8); bill 1.15 (29.2).

Recognition Marks.—Robin size; *bright* red on head and neck above; "ladder back" black and white; *"chow-chow"* cry.

Nest, in holes in trees at considerable heights, unlined. *Eggs,* 4-6, pure white. Av. size, .99 x .73 (25.2 x 18.5).

General Range.—Eastern and Southern United States, north casually to Massachusetts, New York, Ontario, southern Michigan, and central Iowa; west to eastern Nebraska, eastern Kansas, Indian Territory, and Texas.

Range in Ohio.—Rather common resident; less common in northern part of state. Non-migratory.

FOR the coincidence I shall not try to account, but it is a fact that whenever the bird-man clears the snow from a log where the wood-choppers have been at work, and sits down after a long morning's work with the birds, to a

RED-BELLIED WOODPECKER
Melanerpes carolinus
5/8 Life-size

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shivering midwinter lunch, the Red-bellied Woodpecker, till then silent, bestirs himself and begins to pout, "*chow—chow-chow.*" Careful attention discovers the pouting hermit taking his brief nooning in the middle heights of a twinned tree trunk, or else darkly silhouetted against the wintry sky. Here he hitches and grumbles by turns, and is ready for bed again long before the diner-out has brushed the crumbs from his chilly board.

To me there is something uncanny about this ascetic bird, who whiles away his winter hour in the seclusion of a narrow cell; and in spring, scarcely less unsocial, retires to the least frequented depths of the forest to breed. Far from the haunts of men, and secure in the protection of abundant leafage, the birds do unbend somewhat from that austere dignity, and probably have pretty gay times among themselves. At this season they have a chirruping cry, which only the experts can distinguish from the noisiest of the Red-head's notes; and another, a very startling expression of mingled incredulity and reproach, "*Clark.*" This is evidently analogous to the Red-head's *Queer,* but is rendered with quite the style of the English "Walker!"

The bird is nearly a vegetarian, as becomes an anchorite, and lays up frugal stores of mast and corn. The nesting is not different from that of other Woodpeckers, except that the birds are less frequently found in exposed situations, and there are very few sets of eggs from Ohio in collections.

No. 157.

NORTHERN FLICKER.

A. O. U. No. 412 a. **Colaptes auratus luteus** Bangs.

Synonyms.—FLICKER; YELLOW-SHAFTED FLICKER; GOLDEN-WINGED WOODPECKER; YELLOW-HAMMER; HIGH-HOLE; HIGH-HOLDER; PIGEON WOODPECKER; WAKE-UP. (These are the leading types. Mr. Frank L. Burns in his excellent monograph[1] lists one hundred and twenty-six designations of this bird).

Description.—*Adult male*: Top of head and cervix ashy gray, with a vinaceous tinge on forehead; a bright scarlet band on the back of the neck; back, scapulars, and wings vinaceous gray with conspicuous black bars, brace-shaped, crescentic or various; primaries plain dusky on exposed webs; lining of the wing and shafts of the wing-quills yellow; rump broadly white; upper tail-coverts white, black-barred in broad, "herring-bone" pattern; tail double-pointed, black, and with black shafts on exposed upper surface; feathers sharply acuminate; tail below, golden-yellow and with yellow shafts, save on black tips; chin, sides of head, and throat vinaceous, enclosing two broad, black, malar stripes, or moustaches; a broad, black, pectoral crescent; remaining under parts white with heavy vinaceous shading on breast and sides, everywhere marked with sharply defined and handsome round, or cordate, spots of black. Bill and feet dark plumbeous. *Adult female*: Similar, but without black moustache. Sexes about equal in size.

1 The Wilson Bulletin, No. 31. A Monograph of the Flicker (*Colaptes auratus*), By Frank L. Burns. Oberlin, Ohio, April, 1900.

Length 12.00-12.75 (304.8-323.9); av. of thirteen Columbus specimens: wing 6.13 (155.7); tail 4.34 (110.2); bill 1.34 (34.).

Recognition Marks.—Size not comparable to that of any better known bird; white rump; yellow "flickerings" in flight; pectoral crescent; black-spotted breast, etc.

Nest, an excavation in a tree or stump, usually made by the bird, at moderate heights; unlined, save by chips. *Eggs,* 4-10, usually 7 or 8, glossy white. Av. size, 1.09 x .85 (27.7 x 21.6).

General Range.—Northern and eastern North America, west to the eastern slope of the Rocky Mountains and Alaska. Occasional on the Pacific slope from California northward. Accidental in Europe.

Range in Ohio.—Abundant. Sparingly and irregularly resident throughout the state, increasingly southward.

FEW birds are better known in town or country than this noisy, energetic and usually confiding Flicker. He is perhaps better known hereabouts under the name Yellow-Hammer, but this title has long been preempted by an Old World Bunting, *Emberiza citrinella,* and its use in the present connection should be discontinued. All the greater pains should be taken to employ an American name for this bird, because he is a true son of the soil, widely distributed, characteristic, familiar, and if unhindered, well able to adapt himself to the rapidly changing conditions of American life.

It is perhaps as a musician that the Flicker is best known. The word musician is used in an accommodated sense, for the bird is no professional singer, or instrumental maestro; but so long as the great orchestra of Nature is rendering the oratorio of life, there will be place for the drummer, the screamer, and the utterer of strange sounds, as well as for the human obligato. The Flicker is first, like all other Woodpeckers, a drummer. The long rolling tattoo of early springtime is elicited from some dry limb or board where the greatest resonance may be secured, and it is intended both as a musical performance and as a call of inquiry. Once, as a student, the writer roomed in a large building, whose unused chimneys were covered with sheet-iron. A Flicker had learned the acoustic value of these elevated drums, and the sound of this bird's reveille at 4:00 A. M. was a regular feature of life at "Council Hall."

The most characteristic of the bird's vocal efforts is a piercing call delivered from an elevated situation, *clape* or *kly-ak,* and *cheer* or *kee-yer.* The scythe-whetting song is used for greeting, coaxing or argumentation, and runs from a low *wee-co, wee-co*—through *wake-up, wake-up, wake-up*—to an emphatic *wy-kle, wy-kle, wy-kle,* or, in another mood sounds like *flicker, flicker, flicker.*

Altho the bird is resident more or less throughout the state, it is not able to withstand the most severe weather, and its numbers are greatly augmented by the returning migrants in spring. In the early days of April courtship

NORTHERN FLICKER

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is in progress, and the love-making of the Flicker is both the most curious and the most conspicuous of anything in that order. An infatuated Flicker is a very soft and foolish-looking bird, but it must be admitted that he thoroughly understands the feminine heart and succeeds in love beyond the luck of most. A bevy of suitors will lay seige to the affections of a fair lady, say in the top of a sycamore tree. Altho the rivalry is fierce, one gallant at a time will be allowed to display his charms. This he does by advancing toward the female along a horizontal limb, bowing, scraping, pirouetting, and swaying his head from side to side with a rythmical motion. Now and then the swain pretends to lose his balance, being quite blinded, you see, by the luster of milady's eyes, but in reality he does it that he may have an excuse to throw up his wings and display the dazzling cloth of gold which lines them. The lady is disposed to be critical at first, and backs away in apparent indifference or flies off to another limb in the same tree. This is only a fair test of gallantry and provokes pursuit, as was expected. Hour after hour, and it may be day after day, the suit is pressed by one and another until the maiden indicates her preference, and begins to respond in kind by nodding and bowing

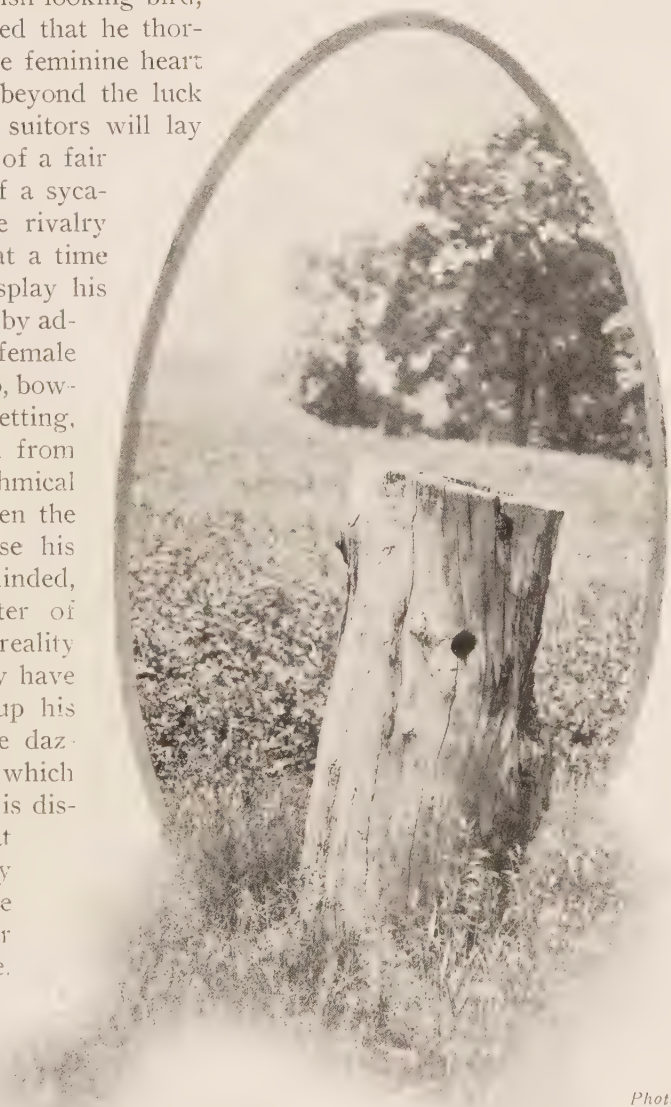

Photo by the Author.

Taken near Columbus. A LOWLY NEST.

and swaying before the object of her choice, and to pour out an answering flood of softly whispered adulation. The best of it is, however, that these affectionate demonstrations are kept up during the nesting season, so that even when one bird relieves its mate upon the eggs it must needs pause for a while outside the nest to bow and sway and swap compliments.

In nesting the Flicker usually chisels out a hole at a moderate height in orchard tree, fence-post, stub, or telegraph pole, but sometimes resorts to the dead tops of forest trees. In the West, in places where timber is less abundant, it sometimes drills holes through the roofs or sheathing of houses, and nests in the crannies within. Seven or eight highly polished, white eggs are laid upon the chips, which usually line the nest, and incubation begins customarily when the last egg is laid. The female is a close sitter, and instances are on record where pebbles dropped in upon her have failed to dislodge her, or where once being lifted off she brushed past the disturber to re-enter the nest. Altho provided with a bill which might prove a formidable weapon, the Flicker is of too gentle a nature to wield it in combat, and seldom offers any resistance whatever to the intruder.

After fourteen days young birds are hatched, blind, ugly, helpless. In a few days more, however, they are able to cling to the sides of the nesting hollow, and are ready to set up a clamor upon the appearance of food. This noise has been compared to the hissing of a nest of snakes, but as the fledglings grow it becomes an uproar equal to the best efforts of a telephone pole when the wires are singing.

The young are fed entirely by regurgitation, not an attractive process, but one admirably suited to the necessities of long foraging expeditions and varying fare. When able to leave the nest the fledglings usually clamber about the parental roof-tree for a day or two before taking flight. Their first efforts at obtaining food for themselves are usually made upon the ground, where ants are abundant. These with grasshoppers and other ground-haunting insects make up a large percentage of the food, both of the young and adults.

In many parts of the state the Flicker has suffered much from ignorant and thoughtless persecution. Indeed, it has been regarded in some quarters as a game bird. To those who have any sense of economic or sentimental values, it must seem a shame to sacrifice such a beautiful, honest, and useful bird for his paltry mouthful of meat. As well shoot Cupid and roast him on a spit.

No. 158.

BELTED KINGFISHER.

A. O. U. No. 390. **Ceryle alcyon** (Linn.).

Synonym.—Commonly called plain KINGFISHER.

Description.—*Adult male*: Above, bright bluish gray, feathers with blackish shafts or shaft-lines; loosely crested; edge of wing white; primaries dusky, white-spotted on outer web, narrowly white-tipped, broadly white on inner web; coverts often delicately tipped or touched with white; tail bluish gray above, the central feathers with herring-bone pattern of dusky; remaining feathers only blue-edged, dusky, finely and incompletely barred with white; lower eyelid white, and a white spot in front of eye; throat and sides of neck, nearly meeting behind, pure white; a broad band of bluish gray across the breast; remaining under parts white, sides under wing, and flanks, heavily shaded with blue-gray; bill black, pale at base below; feet dark: *Adult female*: Similar, but with a chestnut band across lower breast, and with heavy shading of the same color on sides. *Immature*: Like adults, except that the plumbeous band of breast is heavily mixed with rusty (suggesting chestnut of female). Length 12.00-14.00 (304.8-355.6); wing 6.21 (157.7); tail 3.84 (97.5); bill from nostril 1.69 (42.9).

Recognition Marks.—"Kingfisher" size; blue-gray and white coloration; piscatorial habits; rattling cry.

Nest, at end of tunnel in bank, four to six feet in, unlined. *Eggs,* 6-8, pure white. Av. size, 1.31 x 1.04 (33.3 x 26.4).

General Range.—North America from the Arctic Ocean south to Panama and the West Indies. Breeds from the southern border of the United States northward.

Range in Ohio.—Common along streams and reservoirs; resident southerly. Found casually in winter throughout the state wherever streams are open.

WHEN we were small boys and had successfully teased our fathers or big brothers to let us go fishing with them, we were repeatedly admonished not to "holler" for fear of scaring the fish. This gratuitous and frequently emphatic advice would have been discredited if the example of the Kingfisher had been followed. Either because noise doesn't matter to fish, or because he is moved by the same generous impulse which prompts the cougar to give fair and frightful warning of his presence at the begining of an intended foray, the bird makes a dreadful racket as he moves up stream and settles upon his favorite perch, a bare branch overlooking a quiet pool. Here, altho he waits long and patiently, he not infrequently varies the monotony of incessant scrutiny by breaking out with his wierd rattle—like a watchman's call, some have said; but there is nothing metallic about it, only wooden. Again, when game is sighted, he rattles with excitement before he makes a plunge; and when he bursts out of the water with a wriggling minnow in his beak,

he clatters in high glee. If, as rarely happens, the bird misses the stroke, the sputtering notes which follow speak plainly of disgust, and we are glad for the moment that Kingfisher talk is not exactly translatable.

It is not quite clear whether the bird usually seizes or spears its prey, altho it is certain that it sometimes does the latter. The story is told of a Kingfisher which, spying some minnows in a wooden tub nearly filled with water, struck so eagerly that its bill penetrated the bottom of the tub, and so thoroughly that the bird was unable to extricate itself; and so died—a death almost as ignominious as that of the king who was drowned in a butt of Malmsey wine.

Taken near Elyria. *Photo by the Author.*

"OVERLOOKING A QUIET POOL."

When a fish is taken the bird first thrashes it against its perch to make sure it is dead, and then swallows it head

foremost. If the fish is a large one its would-be host often finds it necessary to go through the most ridiculous contortions, gaspings, writhings, chokings, regurgitations, and renewed attempts, in order to encompass its safe delivery within.

Kingfishers have the reputation of being very unsocial birds. Apart from their family life, which is idyllic, this reputation is well sustained. Good fishing is so scarce that the birds deem it best to portion off the territory with others of their own kind, and they are very punctilious about the observance of boundaries and allotments. For the rest, why should they hunt up avian companions, whose tastes are not educated to an appreciation of exposed, water-soaked stubs, and a commanding view of river scenery? However, I once did see a Kingfisher affably hobnobbing with a Kingbird, on a barren branch which overlooked a crystal stream in Idaho. I wonder if they recognized a mutual kingliness, this humble fisherman and this petulant hawk-driver?

Kingfisher courtship is a very noisy and spirited affair. One does not know just how many miles up and down stream it is considered proper for the gallant to pursue his enamorata before she yields a coy acceptance; and it is difficult to perceive how the tender passion can survive the din of the actual proposal, where both vociferate in wooden concert to a distracted world. But la! love is mighty and doth mightily prevail.

The nesting tunnel is driven laterally into the face of a steep bank, preferably of sand or loam, usually directly over the water, but occasionally at a considerable distance from it. Dr. Brewer reports one in a gravel pit at least a mile from the water. The birds are not so particular as are the Bank Swallows about digging near the top of the bank, but, especially if the bank is small, usually select a point about midway. The tunnel goes straight in or turns sharply to suit an occasional whim, until a convenient depth, say five or six feet, is reached, when a considerable enlargement is made for the nest chamber. Here, early in May, six or seven white eggs are laid, usually upon the bare earth, but sometimes upon a lining of grass, straw and trash. From time to time the birds eject pellets containing fish scales, the broken testæ of Crawfish and other indigestible substances, and these are added to the accumulating nest material. Sanitary regulations are not very strict in Kingfisher's home, and by the time the young are ready to fly we could not blame them for being glad to get away. The female is a proverbially close sitter, often permitting herself to be taken with the hand, but not until after she has made a vigorous defense with her sharp beak. If a stick be introduced into the nest she will sometimes seize it so tightly that she can be lifted from the eggs, turtle fashion.

The parents are very busy birds after the young have broken shell, and it takes many a quintal of fish to prepare six, or maybe seven, lusty fisher princes

for the battle of life. At this season the birds hunt and wait upon their young principally at night, in order not to attract hostile attention to them by daylight visits. Only one brood is raised in a season, and since fishing is unquestionably a fine art, the youngsters require constant supervision and instruction for several months. A troop of six or eight birds seen in August or early in September does not mean that Kingfisher is indulging in mid-summer gaities with his fellows, but only that the family group of that season has not yet been broken up.

No. 159.

YELLOW-BILLED CUCKOO.

A. O. U. No. 387. **Coccyzus americanus** (Linn.).

Synonym.—RAIN-CROW.

Description.—*Adult*: Above nearly uniform, satiny, brownish gray, with something of a bronzy-green sheen; the inner webs of the primaries cinnamon-rufous, the outer webs and sometimes the wing coverts tinged with the same; central pair of tail-feathers like the back and completely covering the others during repose; remaining pairs sharply graduated,—blackish with broad terminal white spaces, the outer pair white-edged; a bare space around the eye yellow; under parts uniform silky white or sordid; bill curved, upper mandible black, except touched with yellow on sides; lower mandible yellow, with black tip. *Immature*: Similar to adult, but plumage of back with slight admixture of cinnamon-rufous or vinaceous; tail-feathers narrower,—the contrast between their black and white areas less abrupt. Length 11.20-12.60 (284.5-320.); wing 5.60 (142.2); tail 6.00 (1.52.4); bill 1.00 (25.4).

Recognition Marks.—Robin to Kingfisher size; slim form and lithe appearance; brown above, white below. Distinguishable from the next species by definite yellow lower mandible, more or less extensive cinnamon-rufous of wing, and sharply-graduated, broadly white-tipped tail feathers.

Nest, a careless structure of twigs, bark-strips, and catkins, placed in trees or bushes, usually at moderate heights. *Eggs,* 4, sometimes 5, 6, or even 8, pale greenish blue, becoming lighter on continued exposure. Av. size, 1.27 x .91 (32.3 x 23.1).

General Range.—Eastern temperate North America, breeding from Florida north to New Brunswick, Canada and Minnesota, west to the eastern border of the plains, and south in winter to Costa Rica and the West Indies.

Range in Ohio.—Abundant summer resident. Less common northerly.

MOST birds prefer to face the enemy, so to keep his every movement well in eye, but Cuckoo presents his back, a cold gray affair, from behind which he peers now and then, turning his neck and giving you one eye in a lofty, well-bred way. I recall no other bird whose gaze is so calm, so direct,

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YELLOW-BILLED CUCKOO
Coccyzus americanus

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so fearless, yet withal, so decorous. But nothing escapes him. He is not so vulgarly devoted to curiosity that he forgets business. Mercy, no! You may be within ten feet of him, but he plucks and swallows a caterpillar with as little ado and apology as tho you were in the next county. But make a false motion and the bird glides away into the deeper foliage with an ease and grace born of long practice. Silken, silent, sinuous, are adjectives which you instinctively apply to this sober, sly bird as he steals through the upper branches, scarcely seen, but not unseeing, to emerge at length from the opposite side of the tree and to dart away like a lithe brown arrow into some distant copse.

The association of birds and seasons has nowhere a more striking exemplification than in the case of the Yellow-billed Cuckoo and the month of August,—at least here in central Ohio. The month belongs to the bird. While other birds are hiding in the underbrush or sulking somewhere in the shade, the Cuckoo is in the best of humor. It is then that he shows himself most freely as he reaps his staple harvest of tent caterpillars. Nesting has been purposely deferred to late June, or even early August, in order that the young might grow during this time of greatest plenty. The bird's conduct at this season is quite in contrast with his behavior in spring. *Then* he probably remained undiscovered until the end of the first week or the middle of the second week in May, but it is almost certain that he had been in the country for a week or so. He had only been waiting for the novelty of the strange land to wear off before he should venture to proclaim himself. This he does by a series of explosive pouting notes, *Cook, cook, cook, cook, cook, cook, cook, cook, cook,* delivered rather slowly, rallentando et diminuendo.

The female Cuckoo is a rather slovenly nest builder, and nowise regular in her habits. Nesting may be undertaken as early as the last week in May, but I once found a nest with fresh eggs at this latitude on the 16th of August —the latter perhaps a second set. In construction the nest is usually little more than a careless platform of small sticks lined with catkins, chiefly of the oak. Occasionally twigs bearing green leaves are worked in to aid in concealment. The location may be a thorn bush, black haw tree, or wild plum thicket, or even an exposed horizontal branch well up in a forest tree. The eggs are sometimes laid at intervals of three or four days, and incubation may commence with the deposition of the first egg. A nest may thus contain at the same time growing young and fresh eggs, altho the latter are likely to suffer from neglect or final ejectment. In keeping with this general carelessness is an ancestral habit, not yet quite overcome, of occasionally imposing eggs upon foster parents. Thus, Dr. Jones of Circleville tells of finding an egg of this bird in a Cardinal's nest, and another, which he thought belonged to this species, among the eggs of a Catbird.

That the Cuckoos are thoroughly useful birds the following quotation

from Butler's "Birds of Indiana," will go to prove: "Few birds are of so much service to the farmer. Especially are the fruit growers and nurserymen its debtors. In early spring they love the orchard. I have known them to destroy every tent caterpillar (*Clisiocampa americana*) in a badly infested orchard and to tear up all the nests in half a day. While they may have eaten some caterpillars, out of the most of them the juices were squeezed and the hairy skin dropped to the ground. Almost every watchful fruit grower has had a similar experience. Prof. F. H. King found upon examination, that one had eaten nine larvæ of a species that destroys the foliage of black walnut trees. They also eat many canker worms. . . . While they occasionally eat some of the smaller fruit, their work all summer long is to protect the fruit tree from its enemies. Altho it has been accused of robbing the nests of other birds and eating their eggs, I do not believe the charge has been sustained."

No. 160.

BLACK-BILLED CUCKOO.

A. O. U. No. 388. **Coccyzus erythrophthalmus** (Wils.).

Synonym—RAIN CROW; RAIN DOVE.

Description.—*Adult*: Color of upper parts like that of preceding species; no rufous on wing; outer pairs of tail-feathers like back, but paler; narrowly and indistinctly dusky-and-white-tipped; tail averaging longer than in *C. americanus;* circum-ocular bare space livid yellow; the edges of the eyelid bright red; under parts white,—the throat, sides of neck, and sometimes flanks and crissum washed with pale buffy, or buffy ash; bill normally black all over, sometimes obscurely touched with yellow on lower mandible. *Immature*: Like adult, but without dusky subterminal bar on tail-feathers; wings with rusty edgings; eyelids pale yellow. Length 11.00-12.50 (279.4-317.5); wing 5.30-5.85 (134.6-148.6); tail 6.60 (167.6); bill .87 (22.1).

Recognition Marks.—Robin size; slender form and lithe appearance; sober colors; bill black; no rufous on wing; tail-feathers *narrowly* tipped with white.

Nest, similar to preceding, but more carefully constructed, and somewhat deeper; at moderate heights, often in brushy swamps. *Eggs,* 3-5, rarely 6, greenish blue, deeper in shade than those of the foregoing species. Av. size, 1.10 x .83 (27.9 x 21.1).

General Range.—Eastern North America west to the Rocky Mountains, breeding north to Labrador, Manitoba, and eastern Assiniboia; south in winter to the West Indies and the Valley of the Amazon. Accidental in the British Islands and Italy.

Range in Ohio.—Common migrant. Rather common summer resident in northern Ohio; less common southerly. Everywhere less common than preceding species.

IT is difficult at best to dissociate this bird in one's mind from the other species, the Yellow-billed Cuckoo. Very similar they are both in habits and in general appearance, altho there are infallible rules for distinction in the latter respect, if a fair view is afforded. Both the absence of rufous in the wing, and smaller, less pure, terminal white spots in the tail-feathers, serve to mark this bird during flight; but it is more satisfactory to ogle the bird in the bush until the "red eye" and black bill show up. Indeed it must be confessed that the chief interest of the Cuckoos to an ornithologist lies in the constant practice in identification which they afford.

The note of this species is phrased, rapidly uttered, and more musical than that of *C. americanus,—Cookookook, cookookook, cookookook.* At some distance the sound is not unlike that made by a farmer mending his fence, as he pounds a resonant board into position by two or three smart strokes of the hammer. The bird is fond of wet weather, and especially appreciates that sultry mugginess which often precedes a rain. It is at this time that his notes are most likely to be heard, this habit having won for him in connection with the Yellow-billed species, the title of Rain-Crow or Rain-Dove.

In view of recent evidence it seems probable that the Cuckoos, at least the birds of this species, are largely nocturnal in their habits. Mr. Gerald H. Thayer in a recent article in Bird Lore[1] reports a remarkable series of observations taken near Mt. Monadnock in southwestern New Hampshire. He finds that these Cuckoos are habitually abroad during the pleasant nights of mid-summer and that they travel about at great heights, apparently going on long journeys in search of food, and that their presence is indicated by frequent gurgling notes by which their aerial course may be traced and their altitude inferred. These "mid-summer, mid-night, mid-sky gyrations" certainly put the bird before us in a new light, and it is to be hoped that observers here in Ohio may discover whether such habits prevail locally.

At the nesting season the Black-billed Cuckoo is to be found chiefly in low damp woods or bottomland thickets. The nest is placed at moderate heights and is usually well concealed in thorn bushes or clustering vines. In construction it is a little more substantial than that of the other species, being deeper, with sticks and thorn twigs interwoven. It is provided with a greater abundance of catkins and is often lined with grass. The top, however, is only slightly concave, so that accidents not infrequently befall, especially if the first-hatched finds it convenient to roll out some belated brother. The eggs are four or five in number, somewhat smaller, less elliptical, and noticably darker-tinted than those of the previously described bird.

The parent birds often manifest a curious indifference to molestation, and appear to take downright robbing little to heart. The male, in particular,

1 Bird-Lore (published by the Macmillan Company, Harrisburg, Pa.) Vol. V., September-October, 1903, p. 143-145.

is commonly accused of hard-heartedness. On the contrary, Dr. Brewer relates an instance which came under his own observation, where the female having been thoughtlessly killed by a small boy, the male bird took up the incompleted task of incubation, and successfully reared a brood of five birds.

Photo by R. F. Griggs.

YOUNG BLACK-BILLED CUCKOOS.

The American Cuckoos deserve great credit for endeavoring to forsake the ways of Old World species, which are inveterate cuckolds, like our own Cowbirds. There are, however, marked instances of a lapse from virtue. I once caught a Black-billed Cuckoo in a Catbird's nest, sitting closely, and doubtless in the act of oviposition. Their eggs have been found besides in the nests of Wood Thrushes and Robins, to whose eggs their own bear a close resemblance.